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220

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221

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GCTCTCCTGG GCTTCGTCCG GGGGCCTTGG GTTTAATGGG GCAAAGAAAT CTA CTCTCTTT	21600
TGCAGCACAG ACGGTCGCGG AAGCTGCGGT ACAGAAAGCG CACAGTGCgG acTGCgTGAA	21660
GTACATGTGT TTGTCAAAGG GCCGGGTATT GGGCGTGAGT CAGCAATTAG AATGCTTGGT	21720
ACCATGGGAC TGAGGGTGCG TTCGATTTCG GACATCACAC CCATTCCACA TAACGGCTGT	21780
CGTCCGCGTA AACTCGCCG CATCTGATAA AAGGAGTGAG CATGCCTCGT AGAAATCTTT	21840
TGAAGGGTTT TAAAAGACCT AAGGTGCTGG AGTTTCTTTC GGAGAACTCA AGCGAGTGTT	21900
ATGGGAAGTT CACCGCCTCT CCTTTTGAGA CTGGTTTGG CACCACTGTT GGTAAGTGT	21960
TGCGGCGCGT CTACTCTCT TCTATCCAGG GGTATGCGGT CACCGGGGT CGCATCACGT	22020
CCTTTGATGC GGACGGGGTT GCGCACTTCA TTTCAAGCGA GTTTGAACAG ATTCCCCACG	22080
TACGGGAAGA TACCCTCGAG ATTCTAAATA ATTTAAGCG TCTGCGTTTT CTCCTGCCGC	22140
AGGGGcAGAG TCTAGTACGT TCACGTATGA GTTTCGCGGC GCGgTGCTTT TGACGGGGAA	22200
GGACTTTGCT AAGAAGTTTC AACTCGAGGT TCTGTCTCAA GACCTGCTCA TCATGGAAAT	22260
GATGGACGGT GCGCATGTTG AAGTAGAGCT ACACGTCGAA TTCGGGCGTG GGTATGTACC	22320
TGCTGAATCG CACGATCGGT ATGCCGATTT AGTTGGGGTT ATCCCTGTTG ACGCAATTTT	22380
TAGTCCCGTG TTGAGAGTCC GCTATGATAT TCAGTCTTGC CGTGTAGGTC AGCGGGGGGA	22440
TTACGATCAG TTATCCCTTG AAGTGTGGAC AGATGGTACG GTGCGTCCCG AAGACGCGAT	22500
AgcCGAGGCA GCGAAAATTA TCAAGGAGCA CTTTACAGTT TTTGTTAATT TTGACGAGAC	22560
CGCGCTCGAC CTGGAGGACG AGCCAGAAGA GGATGACCCT GCCGTTCTGG AGCTGTTGAA	22620
CACGAAAATC GCTGATGTAG ATTTTTCAGT GCGCGCGCGT AACTGCCTTT TAACTATGGG	22680
AATCAAGACG CTGGGGGAGT TGACAAGGAT TTCTGAGCAG AACTTGCGA ATACGCGTAA	22740

224

TGTGGGTAAG	AAAAGTTTAA	GTGAGATACA	GGgCAAGTTG	CAGGAATATA	ACTTGCGTCT	22800
GGGTATGGCT	GACTACAACC	ATGTGGGGGT	TGTTAGTAGA	CTGATGCGAC	AGAAGGAAGA	22860
AATAGATGAG	GCATAGGACC	GGTTTCAACC	CGcTTTCGTG	tATGGCTGCG	CATAGGCGTG	22920
CGCTCCGTCG	CAATATGGTT	ACTTCTCTTT	TTAAGTTTGA	GCGGATCACC	ACGACGAAGC	22980
CGAAAGCTGC	CGAGGTGCGG	CGCGCGGCAG	AGAGGTTAAT	TACGCGTTCT	AAGTCTGACT	23040
CTGTGCATAA	CCGGCGCCAG	GTGGCCCGTT	TTATTTGGGA	TAAGGCTGTG	TGACACAAGT	23100
TATTTGCGGA	TATCGGACCT	CGCATGCGGG	AACGTGAGGG	GGGGTATACG	CGCATATTGA	23160
AGTTGGGCCT	CAGGCAGGGG	GATGCGGCAC	ATGTGGTTGT	GTTGGAATTG	GTGACTATA	23220
CCTTTGAAAA	AAGCCTCAAA	AAACGCGCGC	GTACTGATAG	TGTGCCCTGCA	AGAAAAGGAG	23280
CTGGGAAGAA	GGaTGcTTcG	CGCGTCAGTG	GGACGGTTCC	AGACGGTCAG	TCTCAAAAAA	23340
TAGGAAAGAA	GAAAGAATAG	CAGTTGGGCA	ATGGAGGGGT	GGTATGTCGA	AGGCTCATCG	23400
TGGAAAGGGG	ATCCGGGGTA	TGGTCGGTCG	TGGCCGTGCG	GTGTGTCCGG	TGACTGGGCA	23460
GACGGGGGTA	AAGCTCCTGT	ATGAGTGCGA	GATTGATGGT	AAGAAGGTCA	AGGTTTCCAA	23520
GGTTGGGCGC	GCGACTCTCC	AGAATAGGAA	GAGACGTTTG	GATGCGCAgC	CTGGAGCTTG	23580
ATCGCGCATC	CTCGTGATAT	GAGGTTCCGT	CCCAAGGACG	TTAGGTGGTT	GTCCGTTTCT	23640
GTGCTTGCCA	GTTACCATTG	GGATGCAGGT	CGCATCGTGG	TCGGTGTAGT	CAGACGGTAA	23700
ATAGGTGTTT	TCTTGACCGA	GGGCGGCGTC	TCTCGTTACT	TTTACGGCAT	TACCGCGAgG	23760
GTGTATGGC	AAAAAAGGAG	AAGAAAGTGT	GCGGCGGCGA	CGTTCAGGGG	CAGGGAGTTG	23820
CCTCAGGTTG	TGACGAGGCC	TTGGAGCGGG	CAGATAGCCT	TCGCGCGTCT	GATCCTGTAC	23880
CGGTTGAATC	GGGGGAGGGT	TCTGTTCCCTG	GGGAGCATAG	TCaGGAGTTG	GAGACAGGTG	23940
CCTCTGAAGA	GACCTGCGC	GAfCGCGTGA	ATGTTTTGCA	GGAsCAGTAC	CtGCGCAAGG	24000
CTGCCGACCT	CGAAACTAC	CGGAAGCGTG	CGTTGCGGGA	AAGGCAGGAG	gCGGTGGAAC	24060
AnCGTACGCG	GCGCTGCTTG	CCGACATCGT	CGCTGTCTTG	GATGACTTTG	ACCGTGCTAT	24120
TGAAGCGGCG	GATCACGCGT	CGAGTACAGA	GGTGGAGGCT	TCATCTGCCT	TCCGAGAGGG	24180
TGTTCTTATG	ATCCGCAAGC	AGCTCTCCTC	AGTGCTTGAG	ACAAAGTATG	GTCTTGAGTA	24240
TTACCCGGTG	CTCGGGGAGC	GCTTCGATCC	AAATCTCCAT	GAGGCTTTGA	GTATGAGTCC	24300
TTCCGCTTCT	GTGCATGAGA	AGATAGTAGG	GGCAGAGCTA	CAAAAAGGAT	ATAGGGTTAG	24360
GAACCGTATC	CTCCGGCATG	CCAAGGTTAT	GGTGCTCACT	CCTGAAGAGC	AGACAGAGCC	24420
CGATCGTGGG	GATGGcCCTT	CGGAGTGACA	GGCAGGGTAT	GCTGAGAGGT	CAGGATGGAG	24480

TTCTGGAGCA	CCGGTGCTAG	GTAACGGCTA	TACTGCGCgC	CCTGCAGGCA	GGGCGGGTAT	24540
CCTATACAGA	GGAGTTGAGG	GTTATGGGGA	AGATTATTGG	CATTGACTTG	GGAACGACAA	24600
ATTCATGTGT	TGCGATCATG	GAGGGGGGGG	AGCCCGTTGT	CATTCAAAAT	GCCGAAGGGG	24660
GAAGGACTAC	GCCCTCCATT	AyCGGTTTCA	CCTCTGATGG	TGGACGCGTC	GTCGGTCAGC	24720
CAGCAAAAAA	CCAAATGGTT	ACTAATCCGG	AACATACTAT	CTATTCGATA	AAGCGCTTTA	24780
TCGGCAGTCG	TTTCAATGAA	CTGACCGGTG	AAGCAAAAAA	GGTGCCCTAC	AAAATTGTTC	24840
CACAGGGAGA	CGACGTGCGC	GTTGAGGTGG	AGGGTAAGCT	TTACTCTACG	CAGGAGATCT	24900
CCGCGTTCAT	TTTGCAAAAA	ATGAAGAAGA	CAGCTGAGGA	TTATTTGGGC	GAGGCAGTCA	24960
CAGAGCGAGT	CATTACCGTT	CCGGCTTACT	TTAACGATGC	ACAGCGTCAG	GCAACCAAGG	25020
ATGCGGGGAA	GATAGCAGGG	CTCGATGTGA	AGCGTATTAT	TAATGAGCCG	ACTGCTGCGT	25080
CGCTTGCCCTT	TGGTTTAAAC	AAAGACTCTA	AGAGAGAGAA	GATTATTGCT	GTGTATGATC	25140
TTGGGGGGGG	TACCTTTGAC	ATATCCATCT	TGGAACTCGG	TGACGGTGTT	TTTGAAGTCA	25200
AGTCAACGAA	TGGGGACACT	CACCTGGGGG	GCGATGACTT	TGATGCACGT	ATCGTGCAAT	25260
GGCTGGAGCA	GGGCTTCAAG	AGTGACACGG	GTATCGACTT	GGGCAACGAC	CGCATGGCGT	25320
TGCAGCGGCT	GAGAGAAGCG	GCGGAGAAAG	CAAAGATAGC	GCTTCTCTCC	TCTGCGAGTA	25380
CCGAGATTAA	TTTGCCCTTC	ATTACTGCAG	ATGCCAATGG	GcCAAAGCAT	CTCCAGAGGA	25440
CTCTCTCTCG	ATCTGAGTTT	GAGAAGATGA	CTGATGATCT	TTTGTAGCGG	ACCAAAGAGC	25500
CTTGCCGCAA	GGnGCTCAAA	GACGCCGGAA	TTAGTGCGGA	CAGGATCGAT	GAGATTCTCT	25560
TAGTTGGTGG	TTCCACGCGC	ATGCCCAAAG	TAGCGCACGT	GATCAAAGAT	GTCTTTGGGA	25620
AAGAAGGATC	GAAGGGAGTC	AATCCTGACG	AGGCTGTCGC	AATTGGCGCT	GCAATTCAAG	25680
GAGGTATCCT	CGGGGGGGAC	GTGAAGGATG	TACTTCTCTT	AGACGTTACG	CCTCTTTCTC	25740
TAGGAATTGA	AACAATGGGC	GGGGTGTTCA	CTCCGCTTAT	CAGTCGTAAT	ACCACCATCC	25800
CCACGCGCAA	GAGTCAGGTG	TTTTCCACCG	CAGCTGATGG	GCAGACGGCA	GTTTCCATTC	25860
ACGTGCTGCa	GGGGGAGCGT	GGCATGGCGA	ACCAAAACCG	GACGCTCGGT	AATTTTGATC	25920
TAGTAGGAAT	TCCCCCTGCT	CCGCGGGGAG	TGCCGCAAAT	TGAAGTGACG	TTTGACATTG	25980
ATGCGAATGG	TATCGTGAC	GTTTCTGCCA	AAGACCTAGG	GACGGGAAAA	GAGCAGCACA	26040
TCCGCATTGA	AAGTTGAGT	GGTCTGAGCG	AAAGTGAAAT	CGACCGCATG	GTAAAGGAAG	26100
CCGAAGCGAA	TGCAGAAAGT	GATAAGCGTG	AGCgGGAGAA	AATcGAAGCA	CGTAACGTGG	26160
CTGACTCCCT	AATCTATCaG	ACGGAAAAGA	CGCTCAAGGA	GGCGGGAGAC	GGGGTGAACG	26220

226

CTGCGGACCG CGCGGCATA GACGAGCGA TCGCAGAGTT GAAGACGGTG CTCTCAGGc 26280  
GACGACGTCG CATCGATCAA AGCGAAGACT GAGATCTTGC AGCAAGCTTC CTACAAAATT 26340  
GCGGAGGAAA TGTATAAACG TCAAGCAGCA GCGGGTGCCG CTGCAGGTAA GAAGAGTGAT 26400  
GCACCCTCTG GCAATGAGGC AGAAGGTGGT GACGTTGATT ACGAGGTAGT GAAGGACGAA 26460  
GATTCAAAGT AGGCATCTGG TGTGCGGGG AGGGAATAGC CTGCGTGTAG GAGCTGTGTG 26520  
ATCTGACTTC CCCCAGGCCT TTTGTGATCC GGGTGTTCGC CTGATCGCCC GGGTCTTTTCG 26580  
GCTGTCTAGT GGGTGTTTGG ATGTAGCCTG CGTAGCGGT GCTTCAGGCG TCCTGCTTTT 26640  
GTGCCGTTTT CGCGTGCACA CCCTGTTTTT CTGTGTGTGC GCGCAAATGT AGACAAAGAT 26700  
TCTCTAGACG GGGTGATCGT GGCAAAGAAG GATTATTACG AGGTTCTCGG TATCTCAAAG 26760  
ACCGCGAGTG GAGAAGAAAT CAAAAGGCG TACCGGCGGC TGGCTATTCA GTTTCATCCT 26820  
GACCGTAATC AGGGAATAA AGAGGCGGAG GAACGCTTCA AGGAGGCTAC CGAAGCCTAT 26880  
GAGGTGCTCA TTGATGCACA GAAGCGTGCC GCGTACGATC GGTATGGCTT TGATGGCCTG 26940  
AAGGATATGC ACGGTGCGCA TGGCTTTAAC TCTTCGGCCT TTCAGGGGT CGAAGATATT 27000  
TTTGGGGTG GCTTTTCTGA TATCTTTGAA AATATTTTTG GGAcTTCGTC TCGCCGCGGC 27060  
GGTTCAGGGA ACGACGGCTC GGGTGGCTCC GGGCGTGGG CAAACTTGCG TTATGATTG 27120  
CAAATCTCTT TTGAAGAAGC AGTGACGGG AAAAGAGTG AGCTGCACTA TGTGCGCGAC 27180  
GAAACGTGTA TTACCTGCAA GGTGCCGGCT CGGCCAGCGG TGGCGTAAG ATGTGTCCAG 27240  
ATTGCAAGGG TACGGGGCAG ATTCGGCGTA GTACAGGTTT TTTCTCTATT GCGCAAAGTT 27300  
GTGCGCGCTG TGGTGGTGAG GGGACGATTA TCGAAAGTCC CTGTGCACGG TGTGCGGGTA 27360  
GTGGCATTGA GCGTAAAAAG CAAAAATTA TCGTCAGTAT TCCGGCAGgT GTAGAAGAAG 27420  
GGCGGCGCAT TACTATTCCC CGTCAGGnAA ACGCCGGTCG CGCAGGCGGT GCCTACGGGG 27480  
ACCTGTACGT GTTGTGTTT GTTCGTGCGC ATGAGTATTT CGAACGTGAA GGTGCTGACC 27540  
TGTA CTGTGC AACTTCGATA TCGGTAACCC AAGCGATTTT GGGCGCGCAG GTGACGGTGC 27600  
GGGCATTAGA TGGATCTGCG CACAGnTGCG GGTTCGCGCC GGCACGCAGG GAGGTGCGCT 27660  
TTTGCCTGTT AAGGGTATGG GGTCCCACT GGCGCGCGG GCGGGGATT TGTACGTAAA 27720  
GGTATTGGTG CGTATTCCAA CTACGCTTTC TGCACGGTCG CGTGCGCTCT TAGCGGAGAT 27780  
TTCTCAAGAG GAAGGGGAAA ACGCCCATCC GCCGTTGCTT GAACTTTCAA GTCTCAAGTA 27840  
GGCTACAGAA AGGGGCGCGT GGGTAAAAAG GATTATTCTC GCGTGCGTGG TGTTCCTTTC 27900  
TCGTGTGTCG CAGGATGAGT TGGcTTCATC GTGAtGGGTG CGTGTGCTAT CTGAGTTTTT 27960

227

TTCCACAGT TTAAAGACA ACGTGT TTTT GAAGCAGCCA TACAAAGGGA ACGGTAGGTG	28020
ATTTCGAGAA GGCTCGCAAT TGTAAAGGCA GGTTTCATTCG CACTCCTGGC GCTTT TTTT	28080
TCAATATTTT TCGCCTTCT CAGTCCGCGG TATTCGTTTC TCGGTCGTTT CGTTTCTGCG	28140
CGCGATATGG CGCTGTTGAT TTCTCGGTAT GAGyATTTGC CTGAGCTTTC TTCGCGTGAT	28200
CGAGCCTTGC TGGTAGGTTT CGTTTTCATG ATTTTThGGT TCGGCTTACA GAAATCCAAC	28260
GCTATGCGCA CGGGCGCATC CCGTCTTGTT GTCTA	28295

## (2) INFORMATION FOR SEQ ID NO: 9:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5199 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

AACTTTGTGG TGATTAAGGG GTTGAGCGA TATCAACGCT GGGATCTTGC GCGGGAGTGT	60
TCTATCCGTC ATCTCTATTA TGTGTTGGAT GcTTTGCAAT TGAACGATCA AACAAAGCGT	120
GGGGTTCTGT GGGAAAGCGTA TCTGCCTACG CGTGAAGGTC CTGCACAATG GCCAGGGAAA	180
GAAGGATTTT CGCGCAGGCA ATATCTTGCG TACGCTGcGC TTTCTACTAT CACGCTTATG	240
ATAGAAAACG TTATCGGTCT TTCCATCAGT TTGCCGCGCA AAACAGTGCA CTGGATTATC	300
CCTAACCTGG AGGTGATGGG CATTGAGAAT TTGAGCTtGA AACGGAATCT CATTACGATT	360
CTCTCTTCAA AAAGTGTGCG GGGGTGGGAA GTCTATATGG AAAGCGAGAA ACTTTACTAT	420
TTTACCCTCA ACATCCTTGG ACAGAAAAAG AAGACGCTCC CAATCCCCCTC GGGGAAATGC	480
TCAATGCTCG TCGATAAGTT ATAGTGCGAT AAGAAATGTT TTACGGCGCG TGGGTGCTGC	540
GCGACGTAcT GCGTTTTCTC CAGTGGCGGA GAAAGTTCTG CTAGCCCTTA GTCCAGAGAA	600
GATGGGATGC GGCTGAGGAG CTTAAGAAAG AAATCAAGTT CTGCACGTAC ACGGCAGAGG	660
AAATTATATT CTAAATATTC TGCGCGCTCT CCATCGGGAA AATGCAAGTA GAGGTAGTCG	720
CTTCTCCGTA TGAGCGCGCG GATAACGTCT TGGTTAGAAG GTGTAGCCGT GGTGAGCATG	780
TGCTTGAGCT GGAGcAACgC TGCGCGCTCT GTGGTCAATA GTTCTTTTAC GCGTAGACAA	840
AAGTCCTCTG CAGGTTTTTG AGAAAACGCA AAGGATATCT GTGCGTCTTG TGTGTGCAAA	900
ATGGGTACAT GCGTTCTATG TCTGCGCGTA CAGCAGTGGG TGATGATCTC ACACGCCTGT	960
GCGTGCGAGA CTGTGTGTGA TGTGGTAAGA GCAAGACCTT CTTGGTCTAG ATCGTAAAGG	1020



228

TGCGGGTGCT	CAGCGCAGAG	GGTACGATAA	GCGTGTGCAT	AGTGCACAAG	GTTGGGGATA	1080		
CTTTGTACCG	CGTATCTTTT	CCCCTTAAGG	GAGCGTATCC	CTTCTGGGAA	CAGCGCACAG	1140		
TCCGGATATA	GGCTATGGAG	GCGCGTTGTG	CTGTGGTACA	GTCTTTGTAC	TGGAGCACTT	1200		
CCCCTCGCAT	GGGTAAaTCC	CTTGTTCAT	GAAAAATiTA	AACCGGTGTG	AAAAATAGGA	1260		
ACTCCCTTTT	TTCTCAATCG	GAGTGCAAGT	TGCAACGCGG	cGAGTCCTAC	TGATCCACTA	1320		
GGATGAATGG	AAAGCGGCAC	GACGCCCgCA	TTCTGCGCaC	GTTTGATAAA	TGCgGCATGA	1380		
GTGTACGGGG	TGAAAAAGAA	GTGTGTAGGC	ACGTTCTGCTG	CACGCACCGC	ACGGGGAAAT	1440		
GCGCTTAGAT	CCGCAAAGAG	CGCAACGGTG	CGCGGgAGTG	TACCTATGAA	TGCTTGTTCa	1500		
ATCCAGAACT	GTGATCTTAA	TAAGACAAC	GCATCTGGAA	CAATGTCAGG	TAACAGTGCG	1560		
TTGCACGCCA	CATCTACGGC	AAGTAAAAAG	ATGGTGTCTT	TCATGCGGGC	ACAAAAAGAA	1620		
CGGCAGGCAT	CCAGCGCAGG	ACCGGCACCT	ACGATAAGGA	GTGGTTTGTC	TATACTCTGG	1680		
GGAACAAGGT	GGTGTATGTG	CGAGGGATTT	TGTAATGCG	TAATATAATT	TGAGAATATA	1740		
TTGCGCGCAT	AATTCCTTCC	TGAATGGATG	AGTGTAACTT	TATTGATCCA	AAAGGTGTCG	1800		
ATGAGAGTGC	GTATGTTTTG	CTCGCTTTTCG	TCATAAAAAT	TCCGGTACTG	CGCATATGCG	1860		
CCGGaTCCCG	CAATTTTCAG	TATCTGTTTG	AAAGGGAAGC	GGGTGAGACG	CTCCACGGTA	1920		
TGCAGCACTT	GGGTGATGTG	TGTGGTGTAT	AACACGTACA	CATTCTGTGC	GGTGATAAGC	1980		
TGGCGCGGAG	cgTGcTGCAT	AAAAAGGTGC	ATAAGCTGCA	GGTCACATTC	AAGACAGAGG	2040		
AGAAATGAGG	AAGGAGGCAT	ACGAGTAAGA	AGCGCACATA	GGCCGTGGCC	AAGCACTGGC	2100		
GCGCAACAAA	GTACAAGGGT	ATGCGGCTTG	ACCgCTAAGm	GcGCCACGGC	ncgCTCaTGC	2160		
GCATCCTGTG	CGCGATACTT	TGAGTAAAGG	TAGGTGTGTC	GGTAAAGAAC	GGTGAAGCCg	2220		
TTTTGTGTCT	TGATAAGACG	CGGCGGGAGC	GAGGGAACGT	CGCCACGCAC	GCCAGCGACG	2280		
TCAGATGTAC	CCATAGAAGG	GAAACGCACT	CACAGCCGCG	CCACGCACAG	GgCTAGCGCC	2340		
GAAAGATATT	GTCAAATGTA	TCCTTAAATG	AGGGATGAGC	CAGGATAGTA	TCTACGACCG	2400		
ATTCTGTGTC	CCATGGCATC	TTTGCCGTGT	TTAGCAGCGC	AAGCGGGTAG	CCCGGGTACC	2460		
AAGTGCGCAC	ATGGTGTGCA	TAGCTGTCTC	CGGTAGTAGC	GAGCACTGAT	TCGTCCACTG	2520		
ACTTTTCCTC	GTGTAAC	TGG	AGCAGTACTA	CGGA	ACTATC	AAGAATAAGT	GGGTCAGACA	2580
CCTGCCCCGG	GAGAAGGGCG	AACGCGGTGG	AAAAAAATTT	CTCGTCATAT	GCAATCCGCG	2640		
CTAACGGGGG	GTCGGA	CTGG	CGCGGAAGGG	CAGGGAGCAC	GTCGACATTT	CCGAAATTAA	2700	
TGGGAAAGGA	ACGACTCGTA	TGCACGTCTA	AGTTAAGGCT	CTGTGCGGCG	GCGGTGAATC	2760		

CACCCTGTTT	CGCCCGGGTG	GAAAAGGTAT	GTGCTTCCTC	CTCAAGGAAA	CGTTCGATGG	2820
TGCCCCGCTC	CACACGAGCC	ATGTGTGCGA	ACACGCGCTC	CCGCGTTGCT	GCGTCACTAA	2880
AGTCCGGAGC	GCTAGGTTCA	GCGTCGGTGC	GCACGATGGC	AAAACCGCGC	TCTATCTTCA	2940
CTACAGGACT	CAAGGCTCCC	ACCGCCgTGC	GgAGCACCGT	GTCCAAGTCC	TGCGCGTCGG	3000
GAAAGAATTC	GTTACATCA	CTCCGATAGG	AgTGGGTCA	TTTCCGGTA	GCATCGGTAC	3060
CAACTTTGGT	GGAGCCAGTA	GCGACAGCGT	CTTCAAAAGA	CAATTCCCGT	TTCTCTAGAG	3120
CGCGTGCCGT	GCGGCGCGCG	TcCTCTTCCG	AGGAGTAGGT	GAGCAAGGAA	AGGTGATGCA	3180
GGGTAAAAAG	GTGGGCATGC	TCTTTCCCGT	ACgCGCTGAC	GckTTCAGCG	GGAAACCGCT	3240
CTTCGCCCAA	AACGACGTAA	CGGAAGCTAC	GTTCCTTCTT	CGCCATGTCC	TGAACAAAGC	3300
GCAGTTCTCG	GCTATTGAGC	TTAAGGCCCC	CGCGTCCGT	CTCTTTTCCA	AAGAGGTGGT	3360
AAAGGTACTG	ATCGGAAAGG	AGCGAGTCGC	GCATCTTTTT	GCGCTGAGAA	AGCCGGACAT	3420
GTTCAGGGGT	GCCCTGATAG	CGCTGCGGCG	AGTAAGTACC	GTCAGCGTCA	gctAaAAAGG	3480
AGAGCACCTC	CCGATCTAGC	AGCTCCTCGC	TGAGGGTAAA	GCCGCTTGTC	TTTGTTTGCT	3540
CGGTTCCCGC	AAGCTGGACA	ACCGCGGCGC	GAAAGGCAGC	ACGTAAGACA	CGACGATCCA	3600
TCCCCCTCGC	TTCCTGAGCG	TCCTTGGGGT	ACAAGTTATA	GCGcTCCGCA	GTCTGTGCAA	3660
GCGCAGAGTA	CTGCTGGGAA	AAAAGACTAT	CAGGGGCATT	GGTGAGCGCG	ACCCCTCCCC	3720
AGGAACCGAG	TCGTACGTGG	CCGTGCCCTC	CCCCGCTGAG	GGCAGGGAGA	AACACGAACA	3780
TGAGCGCCGC	CACCGCCAAC	ACCACGCAGC	CGCCCGTCGA	GGCAAGCGCC	CCCCTGCCGA	3840
AGTAGAACGA	TTTCATGGAc	TGCGCAACTG	TGGCACAGCG	GAAGTCCCCC	TGTCAACACC	3900
CGCGCAGaGT	GcCTCGGCTC	AGATCCAGTA	ATCCGTATCA	CACGAGGATC	AAGCAACTGC	3960
GTGCGTGTTT	TGACGTACCG	CGGTGATAAA	GCCTGTGCGC	CTGCAGAGAT	CGAAAAGGGA	4020
TTGGTGAATG	TGCACTTCGT	GCAttTTTTG	TACCCGTCTC	GGTCACGGCA	AATGCGGATG	4080
ATATACCCAT	CCTCTGTTTG	ACTTACGATG	GAGCAATGTG	AAGTCTCTCC	CGGATCGCTT	4140
TTGATGCTGT	ACTGCTGCAT	AAATCCCCCG	TCCCGATCTC	GGCAGACTGT	GGTATTTCCG	4200
TAAGAAATTT	TATGCTTTTG	TGTGTTTCGCT	TGCACTGTAT	TCCGGGAAAA	TGAGAACGCG	4260
CTGTCTTGCC	TCCCTGATAC	CGGATATAAT	GTTTCCCTCG	CGTGGCTTGG	ACGCGTGGAG	4320
GAGGATGTAG	GGTATGTCAA	TCGTGCTGCA	GGGAGTTGCC	GCAGtTCTGT	GCTTTTTTCC	4380
CTTCTGTGCC	CGGTACAGCA	ACTGAGCGTT	CCTGCGCTGC	TTGCTGCTCT	TGCAGGAGCG	4440
GCATTCTCGT	GTGTGCTGTG	CGTCGCAACG	TATGTGCTAA	CGGTGCGCCA	GCGTGCTGGC	4500

230

GCTTTTGGCG TCGTGCCTAA ATGCATTGAA TACACACCCT TTGTGCTGAT GGCGTGCTTT	4560
GTCTCTCCC GCGCGTATGC GCCTACGGTG GCGATGCCGT GGTTAGATT CTTTTTGGG	4620
ATGAGTTGGA TGGTGTGAC TCTGTGTGTC TGTGCGCTGT TGTTTGCCT GAGGAGGAAG	4680
TACGTACATC TCTTTTTC TCGTGGGGTT TCGGTGCACA CGCCCCCTGC GTCTTCGGAC	4740
GTGCGGAGTG TGTGCGCGGA TATGCCAGTG AGAAGGAGGC GAGGAATCTT TGTCGTACTC	4800
GAATGGGTTG ACGCGCTCAC CCAGGCTGCG TGTTCATGC TTTTGGTGAA TTTGTTCCGC	4860
TTCCAGTTGT ACGTATATCCC GAGCGAATCG ATGGTCCCCA GCTTtATGGT CGGCGATAGA	4920
CTCTCGTGT TCAAGACCGC CTCAGGgCCT GTATTCCCGC TTTCTTCGTT TCGTTtGCCA	4980
CGCTGGCGTA CCTACAAGCG CGGAGACATC GTCGTTTTTT cCAATCCTCA TTAcCCTGAC	5040
ACTCCGCCCC CCTGACGAGC ATCACA AAAA TCGACGCTCA AGTCAGAGGT GGCGAAACCC	5100
GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC TCCCTCGTGC GCTCTCCTGT	5160
TCCGACCCTG CCGCTTACCG GTTACCTTGT CCTGCCTTT	5199

## (2) INFORMATION FOR SEQ ID NO: 10:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12838 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

TCACCCCTCTC AAATATCATT CCGCGCGCAC CACATACCCG CAGCACACAC AACTCAACCA	60
CTCTACCCAT AACCTATACC CCTTGTC AAC CCCCACCACC CGCATAAAAT TCTTTAGAAC	120
TCGCCTTTGT ACCCGCACCA CCCCTATTCA CATAAAACG CTGCCCCGGC AAAATACTCC	180
CAGGAGGAAT CGTGATACAT ACTCACACGC TCTCGCTGAG CTTTCATGCTG TTTTCATTCT	240
TCTTCGGTGC AGGAAACCTC ATCCTTCCCC CTTACTGGG AAAACACGCA GGTACGACAC	300
TCGCCACGGC GTTGCTCGGC TTTGCCACTT CCGCAGTCCT CATAACCAATC GCAGGGCTCA	360
TTACTATCGC ACACGCAGgC GGTATTGTCC CTTTGTGAGA AAGGGTAGGA AAACGCTTCG	420
CTCACTTGTA TCCGGCTATT ACTCTCCTTG TCATCGGACC GCGCCTTCT ATCCCACGGG	480
CAGGAATCGT CCCCTTTGCG CTCGCCATCG CTCCCCTCAT CCATCGGGCG AATACCACAC	540
TACTTGCGCA stTATATATA CAACATGCTT CTTTATTGTT TCCTACTGGC TCTGCATGCG	600
CCCACACACC TTAAGCAACA CTCTCGGCAA AGTACTTACC CCCGCGCTCC TAGTACTCGT	660

TCTCCTCCTC	TTCCTTGCCCT	CCTTCACTCC	GACACTCGGT	CCCTACCTCC	CTGCACAGGG	720
CGCTTACGCT	ACCCACATAC	CCTTCAGCCA	GGGATTCTTA	GACGGTTACC	TCACCACGGA	780
TGCACTCGCC	TCCCTTATGT	TCGGCAATAT	GATCCTTACC	TATTTGCATC	GGACCCGCTA	840
CACAACCGCC	CCTTTCCCTC	CCACTCCAGC	AAACACCCCC	GCAGATATGC	GCACCGTCGC	900
CTGGATAGCA	GGGGTCATGC	TCTTTTCTTAC	CTATGGAGTA	CTGGCGCATC	TCGGCGCACT	960
CAGCGCCCGC	CAACTCCCCC	ATACCGTTAA	CGGCGCGCAC	ATACTCGCGT	CGGTGTCACG	1020
CCACCTTTTC	GGAAAAGCAG	GCATCGCACT	ACTAGGACTG	ATCTTTACAA	TGCTTGCCT	1080
AACTACCTGC	GCCGGACTGC	TTGTTTGCCT	CAsGAATTAC	TTCCACAAAC	GCGCACCCCG	1140
TGTGTCTTAC	CTGTGCTGGA	TACGCCTGTT	CACCATATCC	AGCTTTGCGC	TCGCAAATAC	1200
AGGACTAGAA	CGTATACTGG	gCATACGGAA	CACCCCTACT	CATGATCCTA	TACCCAATCT	1260
CGCTGGTCCT	CATTGGCATA	TCACACCTCG	AGCGACTCAT	ACGGATACCA	CGCGCCGCCT	1320
ACCGCCTGAC	AGTATGGAGC	GCAGGAACAC	TCAGCACCTG	TGCAGTCGGT	ACGCCGCTTG	1380
TGGCGCACAC	CCGGATAGGA	CACGTGTTGA	ATACACTcAT	ACATACCCTT	CCACTCGCAC	1440
AGGAACAGCT	CTGCTGGcTT	ATCCCCAGCG	CGGCAGTTCT	TATACTTAGT	ACTGCGCATG	1500
CACGCTTACG	TGAAAAAACA	TGCACGCCCTC	GCGGTACGCT	ACCCcTCACG	GATAACTGAC	1560
CACTGGATCT	CACCATCTTG	TGGAGATGGG	GGAATCGAA	CCCCCGTCCT	AAAGAGCGAG	1620
TGcTGC GCGC	CTACAGGTTT	AGCGGTGCGT	AcTGC GTTTG	TCGGACTCTG	CTAGGCCTGC	1680
ACCGCACGCG	CCAGAGTCTT	AGCACAGACA	AAAGTCCCCC	TACGTCCGCC	GTGCACAACC	1740
TAAGAGCAAG	CTCCGTTTGG	CGTCGGGCCG	ATATGTTTCG	TCAGAGCAGC	GCAAACACAG	1800
GCcCGCGATT	ACGCGGCGAG	CGCGTAGTCG	AAACTGTCAG	AATTGGCAGT	TATAAAGGCG	1860
CCGAATCAGG	AGATCGACAC	TCCACCTGCA	GCGCAACACC	CCACATCCCT	AGTCGAAACC	1920
TAGTCATCCC	CCACAGACTG	ACGTCTGCCC	TTTTCTCTAC	ATTCCCCCTC	CCTCACCTTG	1980
TGCACCCAAC	CTAGGAGGCA	CGCTCTTCCA	TAATCGCCAC	CCCATTTGCTG	GTACCAATCC	2040
GTGCACAGCC	AAGCTCGATA	AAACGCTGCG	CCTGCGCGCG	CGTACGGATG	CCGCCTGAGG	2100
CTTTTATCTT	TGTCTCACCT	TTCAGATATT	TTTTAAAGCA	CTGAATATCC	CCTTCCGTTC	2160
CCCCGCGCGA	CGcgTAnCCG	GTGGATGTTT	TGATAAAATC	CGCGTGTCC'T	GCCTCCACAC	2220
AGGAACACGC	AAACGCGATG	TGCATCTCAT	CTAAGAGGGC	GGTTTCCACG	ATCACTTTTA	2280
CAATGGCCCC	GCGCGCGTGA	CACCGCGCTG	CAACCTGCGC	AATTTGCGGT	TCTACAACTT	2340
CTCTTTCTCC	CGCGCACACC	TTGTCTATAC	GGACGACCAT	ATCCAAC'TCT	TGCGCCCCAT	2400

CGTCCAACGC	ACGctGCGCC	TCAGCGCACT	TGACCTCCGT	GACGTGCGTA	CCAAAGGGAA	2460
AACCGATCAC	GCTGCACACC	CGCACCGCCG	TCCCCCGCAC	CGCACCTGCT	GctAACGCCA	2520
CATGGCAAGG	ATTTACACAT	ACCGACGCGA	AGCGATAGTG	TGCGCCTCTT	GGCACAGACG	2580
CAACACTTCG	GCCTCAGACG	CAGAGGGCCT	TAAGAGCGTG	TGGTCAATAT	ATGCATTGAG	2640
TTCCATGACA	CTATCCTCCC	TGGGACGGAA	TGTCAGCCGT	ACCTAGATGG	GGAAGCGGAC	2700
GCGCCACGC	CTcCGCGGAC	AATTGGCCGA	TCCGCTCCTC	CCCTGCTCCG	TCATATGCTG	2760
CAAGCGCAAA	AAAATACAAA	ACGCCGTTCT	GCAGTCCCCG	CACCGTATAT	GACAAACGCT	2820
TACCCACCCG	AATAGGAGAT	CCCGCCACAA	AATACATCCC	TGACGTGTCG	CCCACATACA	2880
CCACATACCC	CTCTACGTCA	AAGTCAACCG	AAGgTGTgcC	ACGTGAGTAT	CACCGACCCG	2940
TCAGCCGCCT	GCGCAAAAAG	ACGCCCCGGG	GGCAAAGGAC	GCTCATCTTG	CTCATAATCA	3000
ACGGTTACTG	CATGCACCAC	CGGTGTCTTA	CGACCTGCAC	CATCTGGATA	CAATTGCACA	3060
GCCACCTGGA	AGTATCGTCC	TTCCAATCCG	CTGAGCGGCT	GGCCTGCCAC	CACCGGCTGC	3120
CACAACGGGT	ACTCCAACGT	CCAGTCTCTT	TTCGTTTGTG	CTACTCGCAC	GAAGAACGCC	3180
ACATCTGCCT	GCTCTGGAAT	ATCCACATCT	GCATTACAC	GCCGGACCAC	CGCCTGCAGT	3240
CCTCCTGCAT	CCGTGATCTC	CGACTCAAAG	CGGCCACCTG	CCTGGTCAAA	ACGCGCAAGA	3300
CGGTTAAAAC	GGCGCAGcAC	CTCTCCTGCT	TCAGACGGCG	GAACAAATTC	TTCAGTAATC	3360
ACCACCTCAT	CGATCAGACC	AGAGTAGCGC	TCCCCGATAT	GTACTGCGGC	TGCAGCGCCT	3420
AAACCGGCAT	GCCACACCTG	GCCAGTTTCA	TCCTGCGAAT	CCGTGAGtAC	TCAAGACATT	3480
CTGTACGCCC	ATTATGCGA	TACTCAAGCA	CACCGCGCGT	TTCGTGCTAC	GTGAGCATAT	3540
GGTGGCTCCA	cCGCTCTGGC	AGCACGTGCG	TACGCGaAcG	GaGaCGCAAA	GAGACTGCCT	3600
GTCCGCGCAC	GTCATTCCAC	AAmCCCTCCG	CGCGCCAyTC	AAGCCGGTGC	TGTAAAATGT	3660
GCGCCACAAT	ATGCTGATAA	AAAGAACGTC	CGCGATCAGA	AAGAGAAGAA	CGCCACCGGa	3720
ACAACACCGC	CCCGTTCTCA	CTCACCGCAG	gATaCAGCCA	AAACTCAATG	GAGAACGAAG	3780
ACAAGGCCTG	cGACCCATAA	AAAAGAGCGC	CCGGATTTGG	CTGTAGCACT	ACCCCTTCTG	3840
CACCATCTCC	CCCCGCGGCC	CCCCCATATG	CAGATGGCAC	GGAGCGGTGC	ATCGTGCGAA	3900
ACAACGcCGC	CCCCsCTCCG	CGATGCGCAC	GCTCTTCGCC	CACATGtGCG	CAGAGGAGGA	3960
CTGCACACGA	TAACGACCGT	ACAAATCGCT	GACCAACGGA	TcATCAAAAC	TAAGATACAA	4020
GTCACCCCGA	ACACTGCGGG	TACGcGCAgC	AGaAGAAAGT	TCAAGCGCCG	GATGGCCCCG	4080
TCGCCCCACA	CGCGTACGCA	GGTTTTTTTAC	CCGTGTAAGC	GACTGCCACC	CcTGCGCACC	4140

CCCCAGCAgC	AGTGCgCTTC	CTTTGCATAC	AGCACACCCG	CaGCATTCCC	CTCCCCsynC	4200
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ACCCcAGGGA	AAAAGAGCGT	CTCCTCAGCA	GACAGCGAAA	ACGAATGGGC	ACTCCGCTAC	4440
AACGGTTcAG	CCTAAGGGCA	AACCATCACC	CTTACCCCGG	CGCATGGTcA	CGTAGCGGTT	4500
CAAATCCGTC	ATATTTTTTAA	CTACTATCCG	GCGCTCTTGC	CACTCAACCT	TCCGCTGATC	4560
AGAAAGCCTG	CGCAGCGCGT	CCTGTACCTC	CCTGTcAGAA	AGACCAGCCC	ACCGGGCTAT	4620
CTCTTCGATG	CTGATATCAA	AAGAACGCGC	GTCGCTGCTG	CGATCCACGT	GCGGTTGCGT	4680
TTcATCCAAC	ATCAAGAAAA	CATCCCCCAC	ACGCGCAGTA	CTATCTTGAA	TCGTTAAAAT	4740
CATAAAACGC	CGCTTCTGGG	TGTAAATACG	CCGCACAAAC	GTTTTCAAAA	GCCGCATTGC	4800
AATAGCAGGA	TTACCCATCA	TGAGCACTTC	GAAATTCTCC	CGATTGAACT	CCAGCGCCAC	4860
AACATCGTCG	TACGCAACCG	CAGACGCCGA	ACGCGGTGAG	TTGTCGAGAA	TAGACATCTC	4920
TCCAAAAATC	TCCCCCGGTT	GCAACACATC	CAAGTAGCGC	TCCTTTCCGT	TGATAATTTT	4980
AATTAGACGC	ACCCGCCCGC	TCTGCACGAG	GTAGAAACTC	TCCCCCACAT	CAAACCTCTG	5040
GAAGATAACA	GAACCCCGCT	GAAACTTTTT	GGCAAAGCGC	GTAAACGAGG	CAAAGGCATC	5100
AGCCATGCGA	CGCCTCCTCA	CAGGAACGCT	GGAGCTCTTT	TATGCGCGGA	ACTAAAGACT	5160
CAGGAGCGGT	AGAAAGCGCC	TTGTCGTAAA	AAGAAATCGC	CTTATCCGGC	CTCCCCATAC	5220
CCTGATAGCA	CTGTCCCAGA	TACATCAGCA	CCTCCGCAAG	ACGCGTAGAC	TTCGGATTGC	5280
GGGTAATGCA	CTCAGTGAAC	GTCTGAATGC	TCCGCACAAA	CTCCCTCTGC	TCAAAAAGAC	5340
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ACCGGTAATG	CTCATAGGCC	TCACCCCACT	TTCCCTGTTG	CTCAAGAAGC	TCTGCGGCAC	5460
GCAktCCCCC	ACTTCAGAAT	CGACAGCTGA	CTCAGCAAAA	GCAGAAGGCA	CCTCAAAACC	5520
CGCATCCGAA	CcTTGCGCAC	CCGCCTCCTC	AAAGCCGCGC	CCGACTGTAC	CGTCGGCGCT	5580
CTCAAGCATC	GACGCAATAT	CGTGCCGATG	CTTTCCGTCC	GGATACAGTT	CCCGGTAACG	5640
cTGCGCCACC	TGACTTGcAG	CAAGGTAATG	CTCAGAGGCG	TGAAAGGCAC	GGGCAACGGT	5700
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CGTTTGAGCA	AAGGCTTCAA	ACTCCTGACT	CCCAAACGCA	TACACAATCG	AATCCACCAA	5880

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ACCAGTTTTA ATGTACTCAG TCACCTGCGA CCCTGTTTCG ACATCCGCAA AGGTAAGCGC	6000
CACGTGCCCC TTATTTCAGGA TCATAACACG ATCGTCAAGA TCGCCTGAAA AATAGATAAC	6060
CGAATTGGCC TTATACTGAA TGGCTTTTGG CACGTCTGCC TCCGTCTTCC ACGCGACACC	6120
GAGAAAAAGC GTGGCTCCCA CGGTACATTT TCGATAGAAC GGTCAATGCAC TTAAGTCTTT	6180
TTCCAGAATT CACGTACACG GCTCCTGCGg CnACACCTGC AGAGATCGTT CGCACGCCTT	6240
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CTGCCGGTGT ACGTGCCTC AAACGTCTCC CAAGTGTAACA TTGTGGAAAT CCAGAAGAAA	6480
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CCCTGCGAGA AGGGCCTGAG AACACTGCCC CCCAAGTTTA TCGCCTCCGC GAGGGACAGG	6660
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TCGGTGAGAA AAAAGGCCCTC GCACGCATTG AATTGCCCCG TGCGCAtTAC GCCTTTCCCT	7020
ACTCCCGTCT GSTAAAAACC GGATCCAACG GTACCTCTT TGACGGATCC TCTCTGAGCA	7080
TCTATGTTTCG GGACGCGCAC ACCCTTGCCG CGCAGTTCAC TGACGAAGCT GGGCGCCTGC	7140
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CATAGATCAA TCGCTGAAAA GCGAGTATGA AGGGGTGCTG TCCTTCGACT TTGaCAGCGC	7440
GCAGGAATGG GTGCACTTCC TGTACTTACG CACCCCCGGG GGGCTAAAGC TCGAACACAT	7500
AGACTCCACC CACcTGAAGG ATGCGACAGT GTCCGCAGGA GCGTAAGCCC AGTGGTACTC	7560
TAtTCGCGCC GGAAGGACAC GCCGAGCCCC AACCCTAAGA AGCAGTCAGC CGTCGGGAAG	7620

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CCAATCCCCT	TTATGCACTT	GCGCCTATTC	GCGATAAAAA	AAGCTGGGAA	AAATACCGCG	8760
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AATTTGACAA	AAGGGAAGCC	CTCTTTTTC	ACGCACCATG	GAGAGAAGAG	AATATCGAAA	8880
GCCTCGCTAC	nGCCGAGCGG	TGCTACCACA	CTGCACGGCG	ATACTGGCAC	GAAGCGGCGC	8940
TCTGGGCCGA	GCGCGCAAAC	GCCGATCAGT	TTCGTTTCT	GTTCCTCACC	GAGTTGCCTG	9000
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CGCGGAGtC	GCACGTCTCG	AGGCGGTGCG	TGCTCgCTTC	ATGGAGATGA	ACGACACCTA	9120
CTGAGAACGA	ACTCCACCGG	TACCAGGCGA	CACTGAACAC	TTACATCGCC	TGGACTACAC	9180
AGAAGCCGGT	CAATAGCGGG	CGGGTTTGCC	CAGAAACTTt	ACCCCAAGAT	CAGGAAAATC	9240
CGTGAGCACC	ACGTTTGCGC	CCGTCGT TTT	GAACAAAATG	GAAAACATCT	CGTCCaTGGT	9300
GCGCGCGTAG	CTAGGCAGTG	TTTCTTTCgT	ACCGTGTGCA	CATGACATTC	CAATTTTCGCA	9360



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TCCTGTGTTT CACGTTGATC TGTGTAAGCA ACACGCTGAA TCAGCTTCAC GTTCATTTCTG	9600
TACTTTGGTA AAAGTTCTCG TTTGATACGC TTCAGCTCGT TAAAATCATA CGTTTGCACA	9660
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CCTGCAACCA AKGCCGAAA CACCCCCCCC CAAAGCGTCA CACAATATGT TCCCCGCATA	10260
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GCAGTATAAA AGTCAGAAAG CCTCATACTC ACCTAGGGGA AAGACGTAAT GGTACACCAC	11040
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237

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GGTGTAAACG	ACACACGTTT	CAGTCTCCTT	ACTCAGGAGG	AGAACGCACC	CGTATTTCATA	11400
GACCTCAAAA	ATGCCTCGTT	GTTCTTTGTT	TTACGCATCT	TATCAATTAA	CAATTCCACA	11460
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TCCTCCGTCA	GGrGCAACTC	TTCTTTACGC	GTACCAGACT	TTTTAATACT	CACCGCGGGA	11580
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TCTTCAGGAC	GCTCATCGAT	GAGCAGCACG	ATAAGATAAA	CTTCAGGATG	ATTTTGCcGTG	12060
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TCCGTTCCTTG	TTTCTAAATT	CAGCTTTTCC	CGCGGGTACA	AAGGGGTAAG	ACTGTCGAAA	12240
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GCAAAGAAAC	GCTCTCCCTC	CTTAGGGGAG	CGAATCTGCC	CATAGATGGT	GTCGCCCGTT	12360
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GAAGCAAAGA	TAACGCCACC	ATTCTCAGTG	TGATTTTTAA	GAACGTGAAA	GATGATATCT	12540
GACTTTTTCa	TGACAACCAC	GTCTTCTTGA	GAGATACCCC	GCTGTACTGC	AAAATCACGC	12600
AGGgCATGCA	TCCCCATCTC	AGTTAAATCA	TCAATCAGCA	AACGCGCCCT	ACCTTTAACG	12660
TCGGCGGAAG	ACTCACTTGT	TTCCGCATCT	TCTGGGCAGA	AATTTTGCTT	AAAGCGTAGG	12720
GCTCTTCGCG	GACGTTTTTC	CACCTCCAGC	GCTTTTGCGC	TCACCACTCG	TCTCCGTGAG	12780
CGAGAGsGgA	TGACGAGCTT	CTTCCTCCCG	CCGTAGATCG	CATTCCCCCA	CGTCAGCG	12838

## (2) INFORMATION FOR SEQ ID NO: 11:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17378 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

TGCGCGTGTG CCACGCACAC CAGTACGTAT GCTCGAGCAC AGTGGTCACG TGATCACTGA	60
TGACGTGGAG CGGGAGCAGG TTGCCTCTTG TGTCAGTGCT TTTTACGCA CGTAnTtTAC	120
GTGATGTCTA CCCAAAGGG AGTGCGGTGC ACNgTGCTC CACATTTCTA GTTGCTGTAG	180
GGGAAGAGA CTGAGTCGCT GTTTCGGACC GCGTGCGTTT TATGTGCGCG CGCTGTGCAT	240
CGCGCTCCCC GTGATGCTGC ACTCCTTCAT CCAGACGGGT ATTTCTTTT TAGACAACGT	300
TATGGTCTCC CGTTTGGGG ATGTGAAGAT GGGTGCAGTG AATGTGGTCA ACTCGCTGCT	360
CTTTCGTAT GTCACCGCGT TAATGACCGT GTCGAATGCA GGCAGCGTGT TTATGACGCA	420
tACTCAGGAG CCCGTCACGT AkGGGCATGC GGCAAAGCTA CCGATTTAAA CAGTACGCCA	480
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CGTGTGTGTT GGGAAAAAAT GCGCAGGCTG CTCAGATTAT AGCGGAAGgT GAGCGTTACC	600
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TGCGAGAAAC AGGGAAGGTG CTTGTACCGC TTGCAGTGTA CGGGTGCAGT GCCGTATTGA	720
ACGCAtGrGT aATaTATGTT GATTtATGGA AACTGGGGG CTCCGCGATT AGAAGTGCAA	780
GGTGCAGCAT GtGCAACGCT TATAGCGCG GTGGTAGAAA GTCTTATGCT CCTGGTGTAT	840
GTGCGGGTTA AAAAACCGBA CTTTtATGTG CGGCTTTTTT GTCcTGTGCG ATACCCCTGT	900
CACTGTGTAC GGTGATGCTG AGAAAATCGC TGTGGATTTT CGTAGGAGAC ATGGCATGGT	960
CGGTAACGBA GATGGCCGTG GCTGCCTTGT ATCACAGCCG TGGTGGGGCT GAGGTGTGG	1020
CAGGGATGTC GCGGGGTGG AACTCGCGC AATTATTTTT TCTATCATTC CCTGCAAGTA	1080
GCGTGGAAT TACCATTTTG GTCGGGATG TGTAGGGAA AAGCGAGCTA AAGCAGGCGC	1140
AGGATTATGC cACGGTGGTT GATGAACGBA GCGTTCTTTT TAaggTTAGG TTTGGGTGTG	1200
AtTGTGTGTG TAGCGCGTGC aGGGATTCCG TGGGCTTTTG GAGATTtGTC GcATGcTTcG	1260
CAACGTATAG CACAGCAGTT GTGCTCGTG ACGGCGCTGT ATATGCCGAT TTGGATGTAT	1320
TTAAATGCGC AGTATGCGGT GGCACGTGCA GgAGGTGAAG TGATGGTCAC CGCGTGGACA	1380

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CAGCTTGGTG	CGCCGCTTAT	STATGGAATA	GTAAAGAGTA	CAAGTGTAGT	AAAAATGGTG	1500
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CCCAGGGGTG	GCTGCGGCAA	AGTCTTTCTC	TGCTTGGTGT	GCGTACGGTT	CCGGGGCGGT	1740
TGTGTCTTTC	TTGGGACGAG	TTTAAAAAAC	GATGTTTTCA	ATGTGCGCCG	TGTGCGCACC	1800
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CGCGGCAGGC	TGCAGAGGGG	CGCGCACTTT	TTTGCAACCT	TATTCCTCCG	GCATATGCGC	1920
AAGACGGTGC	AGTGTTTGTG	CAGTGGCTTG	CCCGTATACT	CCCTCAACTT	GGATCGTGGC	1980
AACGGCGCGT	TGAATCGCAC	TGCATGCCTC	CAAAAGATGC	GGTATCGCGT	AATACGTTTG	2040
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GCAGTGCTGG	GGAAGACGAT	GCGGTGATGG	CGCGGTGCGT	CTGTGTTTTG	CAGGAGTTAG	3000
CGGCGCTTGA	GCGGCGCTTT	GCACACGTGG	TGCCACCGGA	TCCATATAGT	TTTTTTGTAC	3060
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TTTCTCCTGC	TGAGGTGCTG	AACGTCGTGG	TACTTGATGA	GGAGAAGCGT	TCTGCACTTG	13080
CCATTGTTGC	TGAAAgCCAG	CTGTCTATCG	CGATAGGAAA	GCAAGGTTTG	AACGTGCGTT	13140
TAGcGAATCG	GCTTGTGGAC	TGGAATATCG	ATGTGAAGAC	AGAGAGTCAG	TTTGAAGAGA	13200
TGGATGTGTA	CACCTGACACG	CGTCGTGCGG	CAGAAAATCT	TTTTGATAAc	GATTATCAAG	13260
AAGAGTCTGA	GTTTTTCyTCa	TACGkGGGAT	TTACgCCgGA	GCTCATTAAG	ATTCTGCAGG	13320
ACAACGGTAT	CCAAGACGTA	CAGACTTTGG	TAGATTTGGG	CGAGGAAGGC	TTGCGTGCGC	13380
TTGAGGGCAT	GGACGAGGCG	CACGTACaAG	AATTGCTCGC	CgCCATTGAG	GAGAATTTTG	13440
AAGTTGTCTGA	GGAnGGGGAG	GAGGCTTCAG	TTACATCTTC	TCCCGGGA	GGTGGTGATG	13500
ArGATCAGGC	gTTGCAGTGT	CCTGAgTGTG	GGGTGCgCaT	TACTACTGAC	ATGAGTGAGT	13560

GTCCTCACTG	TGGTATTGGC	CTCAGCTTTG	AGTTTGAATA	CGAAGAGAAC	GwssmaTAGG	13620
AGAGCTATGA	CCTACGAGAC	AATACGCCTA	AAGACACTTC	CCGTGTTGCT	AGTGAGCaGG	13680
CTGTGCgTTC	aCCGGTGAAc	GTCTGGTCcA	AACTACCTCT	CGTACACGGG	CgGATGTTGA	13740
CGTAAAGGAG	AAAAGACTCg	TaATAAAGAA	GACAATCAAA	GTGCGCGCaA	AGAAAGTGGT	13800
TGCCAAAGTT	ACTgTGC GCG	GCGTGTGTCG	TGCGCGGATG	AAAATCGCAC	GCCGGGCGAC	13860
GCGAGTCAGG	CGACTATTTC	TGCCGCGCCC	GAAGATAAAA	AGCAAGGTTT	CCCTGACATT	13920
CGGGAGGATG	GCGTTCGCGG	TGGTGTATCT	GCCTCGTGTG	GCGCTGTGCA	GAACGCTGCG	13980
TCGTCACAGG	TTCCCGGTGC	CCGTACTCCG	GGGGTTATAG	GCGTTCCTGT	TGCCAGCAAA	14040
ACGGTGGAGG	AAGCAAGGGG	TGGGGGAGCT	AAGCGGGTAA	TACTAAGCG	TGTGGGTGGG	14100
GT'TTTCGTGC	TTGATGACTC	TGCGGCACCC	CTAACCGAAA	GGCAGGAAAC	CTTGCACTCTG	14160
GCGCGCGCCT	TTCTCGGT'TT	AGCCGCA GTG	ATCGTCAGCG	CACAtyGGGT	T'TTCTGGTAC	14220
TCAAGCGCGT	GCTAACgCAG	GTGGTGTGCG	GCGTGGAGAG	GGCCGTCCGT	TTGCTCGCGA	14280
T'TTCAGTCGT	GGGTCCACGG	GTGGGTATCG	GCCCGCAGTG	AGAGGTCCGG	CTCGGCCGGC	14340
TGGACGTGTT	GGTTCGGGTC	CAAGAGGGCC	GGCGCCCCTG	CAAGTAGGTG	CTGGTAAGCC	14400
TGCCCAGAAC	AAAAGGTCTT	TCCGGGGCAG	AAAGCAGCAG	ACATATCAGT	ATCAGCATAA	14460
GGATCGTCTT	GAAC'TGGAAG	AAAAGCTTCT	CCAGCAGAAG	AAGAAAAATA	AGGAAAAGCT	14520
TGCGGCGGTC	CCGCGCTCTG	TTGAGATCAT	GGAGTCCGTT	TCGGTTGCAG	ATCTCGCAAA	14580
GAAGATGAAT	T'AAAAAGCCT	CAGAGCTTAT	CGGTAAGCTT	TTTGGCATGG	GCATGATGGT	14640
TACCATGAAT	CAGTCTATCG	ATGCGGACAC	CGCCACGATT	CTTGCTTCTG	AGTACGGGTG	14700
TGAGGTAAGG	ATTGTCAGTC	TTTACGATGA	AACAATTATC	GAAAGTGTAG	GTGACGAGCA	14760
TGCGGTGCTC	CGCGCACGTC	CGCCAGTAGT	GA CTGTTATG	GGACATGTTG	ATCACGGAAA	14820
AACTAAAACG	CTCGATGCCA	TCAGAAGTAC	GCGCGTTGCT	GAGGGGGAGT	TTGGCGGTAT	14880
CACGCAGCAT	ATTGGTGCTT	ATGCAGTCTC	TACTCCGAAA	GGCTCAATTA	CCTTTTTTGA	14940
CACGCCAGGT	CACGAAGCTT	TTACCATGAT	GCGCGCGCGT	GGAGCAGAAA	TTACCGATAT	15000
TGTGGTGCTC	ATCGTAGCTG	cAGACGATGG	GGTAATGCCC	CAGACGATCG	AAGCGATCAA	15060
TCACGCAAAG	GCTTCGAAGG	TTCCCATTAT	TGTTGCAATC	AACAAGATTG	ACCGTGCGGA	15120
TGCGAACCCG	AATAAGGTCA	TGACGCGCCT	TGCTGAGCTT	GGCTTAGCTC	CAGAGGAGTG	15180
GGGTGGTGAT	ACCATGTACG	TGAGTATTTC	TGCGCTGCAA	GGTATTGGGT	TAGATCTGTT	15240
GCTAGATGCC	ATCATGCTGC	AGGCGGAGGT	GATGGAGCTT	CGTGCAAATT	ACGGGTGTTG	15300

TGCAGAAGGG	CGCATTATAG	AGTCTAGGAT	TGATCACGGG	CGGGGGATTG	TCGCGAGCGT	15360
TATCGTGCGT	CGTGGGGTGC	TTCGTGTTGG	TGACACGTAC	GTTGCaGGTG	TGTACTCAGG	15420
GCGTGTGCGG	GCAATTTTTA	ATGATCAAGG	GGAGAAGATT	CAGGAGGCGA	CTCCTAGTAT	15480
GCCCCGTTGAA	ATTTTAGGGC	TTGAGGGAAT	GCCCAATGCG	GGTGATCCTT	TTCAGGTTAC	15540
GGATTCTGAG	CGTATTGCAC	GGCAAATTTT	GCTTAAGCGT	CAGGAGTTGA	GGCGTTACGA	15600
AAATGCGCGC	AACGTGAAAA	GGATAACGCT	TGACAAGCTG	TACGAGTCTA	TCGAGAAGGG	15660
TTCGGTTTCG	GAGTTCAAGG	TTATTATTAA	GGGGGACGTG	CAAGGATCGG	TTGAAGCGCT	15720
CAAGCAATCG	CTTGAAAAAC	TTTCTACCGA	TGAGGTGCAG	TTGCGTGTCA	TTCATTTCGTC	15780
GGTTGGTGCG	ATAAATGATT	CTGATGTTAT	GCTCGCAGCT	GCTGATTCAA	ATGTGACCAT	15840
TGTTGGTTTT	AATGTACGTC	CCACTCCCCA	GGCTGCGGTT	CTTGCAGAAA	GGGAAAGAGT	15900
AGAAATCAAA	AAGTATACTG	TCATCTACCA	GGCGGTGGAG	GAGATGGAGC	GAGCTATGGA	15960
GGGTATGCTC	AAACCATCCC	TCAAAGAGGT	AGTGCTCGGT	TCGGCGGAGG	TGCGCAAGGT	16020
GTTCAAGATT	CCCAAAGTGG	GAAGCGTTGC	AGGAGTATAT	GTGCTTGAAG	GGTAATGAA	16080
GAGGAACGCC	ATTGTTACAG	TTGTGCGCGA	TGGGATTGTC	CTGCATTCCG	GGAAGGTTTC	16140
CTCATTGCGG	AGAGAAAAGG	ATGATGTGAA	AGAGGTACAC	AGCGGCTTTG	AGTGTGGGGT	16200
TGGAGTTGAA	AATTATTTTG	ATTTTAGGGA	GCGTGATCGG	CTTGAATGCG	CGGAGATGAA	16260
GGAGGTGTCG	AGGAAACTGA	AGGATGCCGC	TCTTTCCGAT	GCGGCGCGCT	TACAGGGATG	16320
AAAcAGGTAA	GTCAGTTAAG	GGTGCGCAAA	TTGGGGGAGC	ATATCCGCGC	AGAAATAGCG	16380
CAGCTTATTA	TGCTCGGCAA	AATAAAGGAT	CCACGTGTTT	CTCCCTTTCT	CTCTGTGAAT	16440
TGGGTGGATG	TGTCTGGGGG	GATGGTCTGT	GCGCGGTAT	ATGTGTCGAG	TTTTATGGGT	16500
AAGTACAAAA	CGAAGCAGGG	AGTGCAAGGC	TTAGAAAGCG	CGGCAGGTTT	TATTCGCTCT	16560
GTCTTGCTA	AGAAACTCCG	TCTGCGGCAG	TGTCCGCGTC	TTAGCTTTGT	GTATGACGAG	16620
AGTGTGAGGG	ATGGATTTTC	TCTTTCGAGA	AAAATAGATC	GGTTAGAATC	CGGCGGTGTG	16680
CAGACTGAGC	ATGCCtGACG	CTATTGTTCC	TTTCGCAAAG	GTTCCGGTC	TTACGAGTTT	16740
TGCGGCACTG	GCACAGGTCA	GGCGTCTTCT	GGGAGTAAAA	AAGGTAGGGC	ATACGGGGAC	16800
GCTTGATCGC	TTTGCTGATG	GGCTGCTGTT	GCTTTTGGA	GGGGCTTTA	CCAAACTCGC	16860
GCCGGTGATG	ACTCGCTTGG	AAAAGAGTTA	CGAGGCTCGT	ATCCAGTTTG	GGGTACAAAC	16920
AGACACTCTA	GATCCGGAGG	GGGCTGTCTG	GCGGTGCTCC	TTGTTCCCAA	CATTTGCGCG	16980
CGTGCGTGCG	GCGCTGCCTC	ACTTCACTGG	GAGTATTGAT	CAGGTGCCGC	CTGAATATTC	17040

248

GGCGCTAAAA TTCGGAGGTG TCGTGCGTC CGACCGGGTG CGGCGTGGGG AAGCAGTGTG 17100  
 CATGAAGGCT CGGCGTGTGT TCGTCTTTGA CTGTCAGGTA CTAGGTTGCG AGGCGGATCT 17160  
 GGGTGAATTC AAAAAGACGC AGGCGGGGAG GGGGGCTGCG ATTGCTGATC TTGATCTGAC 17220  
 GCGCGTGCCT GCTGTAACGC TGTACGTACG TTGTTCCGCA GGCTTCTACG TCGGTGCACT 17280  
 TCGCGCGGAC ATAGCAGCCG CTTGCGGCTC TTGCGCGTAT nTTCACATTT ACGGAGAACA 17340  
 CGCATTGGAC CCTTTGATCT TGCACAGGCG GCGGGTGT 17378

## (2) INFORMATION FOR SEQ ID NO: 12:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5641 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GAGGAAGGCA AAACCTTTaA TTAAAGTACA CTGCGCGTAT GAGCAAAAAA TGCGCGCCTG 60  
 TTTGAATATT ATTCTGCACA CAGTACCGAA GTGTtctCTGT TGGGTATGCC AGAGACACGT 120  
 AACAAACAGT TGAATGAGAA GCTTGTGTAC ATCGAGCAGC TACAAArGaA AGTAGTGGCG 180  
 CAATACGATC CGCAGCGGGT GCGCTATTAC TCCCTCAAAC CAATTGTACC CGGTGTACAC 240  
 GGAACATATG CAAGCGCGAT AAGGGACACG CACGGCCGTT GGGTACACGT GATGCACAAA 300  
 GACGGCATCC ACTACACCAT AGAGGGTGGT GCGTACGTTA TGGAAACTCT CTTACCCCTT 360  
 ATTCTTGCGAG ATTTGGAACG GTCTCGTCAC GGATACATGC GTTCTTCTCT GGGGTGCGAT 420  
 GAACTCCCTG CGACGAAGGG aTGGAAGAG CACGTCACGC GTCAACTCGA ACATAGGGAT 480  
 AAACCGCACC GTTGTATCCT GCATGACAGG GGGTGCGTCC TGCArGGGGT TATCGTACGT 540  
 CCACACCGTT GCCTGCACTT GCATAGTGCT GTTTGGTCA CCTGAGAATG TTACCGTAAA 600  
 GGGGAGTGGT GGGCGCGCCT GCGATATGAA CCGTACCACA GATCCCTGCT CCAAACGCGT 660  
 AAAAGGCCTA TCTGCTTCGT ACGCAGCAGT TCCGTGTGGA GAGGTGATGC GCAGTTCGAT 720  
 TGCCTGCGCG CGCAACTGAG AGCGCACCTC CAGGACGTG ATGCGTCCGC CAAAGTAACT 780  
 GcGAGAgTCC ATGGAGATCT GGAGGTGATC CTGTGCCCTTT TGTATTTCCG CCGTGGACAG 840  
 CCGCGCGTGT GTGCGTGAC GTATATGCCG AGGAATGGGC AGTGGAGAGT GAAGCGAAAG 900  
 GGTGAGCCCC CTCTCACTAA TGCGATAgCA TGCGGTAATT TCCTGTGGGA TACGCGTGCT 960  
 TGACAGTGAA amGCTCCAGA GCACACCGTT GATAACGAGC ACAGTCAGTA ATGCACCAGA 1020

AAGCAGAAGG	TTTCTCCTAC	GTATGAAGGG	GATGCGAGGG	TGGGATTTTt	CCCGTTCAAA	1080
AAAGAGAGTG	AGCATAAAAA	GCATAAACGG	AACACAACCG	AGTGCAAAAA	ATACGTTGCT	1140
TTGGTGGAAG	GATAACGGCG	CGGTAACCGC	ACTGTTCTTT	AAGTATGCGT	AAAGGAAGGG	1200
AGCGAAGAGA	AGAAACATCA	TTGCAAGCAT	TATCCGTCGT	GTAGTCTTTC	TCTGTGCGCT	1260
AAAGAAGACA	AGCGAGAGCG	CATACTCTAG	AGCGAAGACT	GCTGAGAGTG	AAAAATCGAT	1320
AACAGAAAAA	AGGACCGCGT	ACAACAGACA	GAGTGTGCTT	GCAAGATATC	CTCCGATAAA	1380
TCCGTTGTGC	AACATGGAAT	CTCTGATTGT	CTTGCTGTTT	GCCATGCACA	CGCACGAGAG	1440
TGCAATTGCG	ATGCTGTGCT	TTACTATGAG	TGCAAGAAGC	GGTAATGCAC	CTGTTGATGT	1500
GTGCGTGCCA	AAGCGGATAA	GAAAAAAAG	AGCGGTAAGt	TGTGTTGCAA	CGAACACGCT	1560
ACACACGCTC	AGTACCCCTA	AGATAGCAGG	GAGCCACCAC	ATGGCTAAAA	TAGTGTTCCTA	1620
GTAATGCCTT	TTGCGCGAGT	CAGAAAGAAA	ACTAAAAATA	GCCAAAGAGA	GCAAAAGAGT	1680
GATGACAGCG	CCTAAGATAA	GAATCACGAA	AAATTGCTCT	CGAATGAGGT	AGAGCGTGCC	1740
GCCGTACGAA	ACACTCACGT	AATGCGTGTC	CCATTCTTCT	GAGTACACCT	GGGTAAGGAG	1800
TGCCgGGAGC	GTGTGCAGTG	CACCTGGAGG	GTACAACGAA	TTTTCCATCC	TTACCGCaGg	1860
AATATGCTCC	TTGATGTAGA	GTGCATGGCG	TGGGTCTCG	TGCAACCATC	CAAGCCGGTG	1920
CAATATGGCG	TCAAAGTCCC	GATAACGGAT	GGGACGTGG	TGTGATGTTA	GGTGTGTA	1980
TACTGCTTGA	AGAAGCCAGG	GTGGGCACAC	TGTACGGTGT	GGGGCGTGT	GCAAGCGCGG	2040
TGGTCTGTGA	GTTTCGTGCA	GTATCAGGAC	TATTGGCGCC	TTATAGGAGG	AGATGAGCGA	2100
GATGAGTTTT	TTAGTTCCTG	TAAGCCGATC	GACGGGCACA	AAATCAGGAA	CGGGAGGATG	2160
GTCGTGTGCA	GTTATTGCCA	CGAGTACCGA	CACGTCTGGG	GTCTGGTGCT	CAAAGTCTTG	2220
CACCAGCAAG	CGGAGCTGCT	GTACCGCACG	CGTCTCGCGT	TCTTGCGCTT	CACGCGATGC	2280
AGTGAAGACG	ACGAGCACAT	CCGTCTTTGG	TCCAAAGAAG	TGAAGCTCGT	TTTCCTGTGC	2340
GTGTACAAAA	ATACCACAGA	GCACGAAAAG	CAGCGCGCGG	CACACCCGAG	TCATGACTTG	2400
TTATCGGTAG	GGAGTGCGCC	GGTTTCGAAC	CATGTCTCTA	TGCGCTTGTA	GGAGCTATTA	2460
ATCcTGCGCA	CTATATCGGC	TGCCTGTTTCG	GACGTGTGCG	TACACGTGAA	GACGTCAGGA	2520
TGGTATTTTT	TCacAGTCGT	TTCCACGACT	GCTTGcAGTA	GGAGAGGGGG	AGCCCTGCAG	2580
GTACTIONAG	GACTGCAAAA	TCCTCAACGA	GTTCAGGAGG	AACAGGGACG	CGCACTGGTC	2640
CTGGGGGAGG	GTTCTTTTTT	GGCGGCGGTC	GGCGCTCCAT	GCGTCTTGCA	CAGGTGCGGT	2700
ACTTGCCGCC	GCGGTGTGCC	CATTGATCGA	AGGGGTCTTC	GTCGGAGTTG	AGCCGGTTCG	2760

250

GTAGGATAGC ACCGATTTCGC TCGTAAAAGC TGGTCATAGA CATGTTCTCTT TTTGAATAAT	2820
GTCGCCGAAG CGTGCGCCTT CTCTGCGTGT ACGGAGCGTT GGAGTACTGC CCCACAAAAC	2880
AGGTTGGCGT GTTCGGGAGC TTCCCCGGCA GAAAGATTTG CCcKCTGCGC ACTATTACCA	2940
GGTTCTCTTT TTGGAGCACA GTCCACGGG GGTATGCGTG GAGATAGTGA AGAGAGCGGT	3000
TAGATTCTTG GTAGTGAGCG CGTTCTGAGG GAGCAAGCAC CTTCTCTCCT GAACCGATGA	3060
CGGCGCGAAC AACGTGCGGG GCATACCCAC GCTCGTGTAG AAAGGAGATA ATCTGTGAGG	3120
GAGAACGGCG AGCGCATGAG TTGAGCsCCG CTGTCACTGGT GCGAAAGTCG GCAGGATCTA	3180
ATGCAATGGA GTCATCGAGT CCTGCATCTG TTCGCGAGAG GCAAATGTGT TTTTCGACGA	3240
TGCAGGCGCC GTGTGCACGG GCAAGGAgCG GGACAAGGAG CGGGTCTACG CTGTGGTTCG	3300
TGACGCCGAC GTTGATATTG AAGATGGTAG CAAGCGCAGG CAGCAGCGCA AGGTTGTACT	3360
CTGTCTCTGG AGCAGGGTAT GCGGTGATGC AGTGCAGTAA GGCCTGGGAG CTGCCCTGCT	3420
TGGTATACTG GCGGCATTGG GCAAGGGCCC CTTCGATTTC CTTCAGGAGG CAGACTCCAC	3480
TTGAAAGTAT AAGTGGAAGT TCTGCAGCAG CGAGTGTGGA GATAAGGGTG GGGTAGTTGA	3540
GCTCTGGGGA AGCTACCTTG AGGAAGTCTG GTTTcAAGGC GAGCGCTCT GTGCAGAGC	3600
GCGGGCCAAA GGGGCTGATG CCGACTAGCA TACCCCTGCT TCGTGCCTGG TTAAAGCACT	3660
GCGCATAAAA GGAAAGTGGA ACTTCTAACT CCTCAAAGCG CTGGTAGAGG GAACTGCTC	3720
CGCTGGGAAG ACGGACAGCC CCCGTCAGCG GGTGCAGTAT TTCGTGCGCG TAGATGAGCT	3780
GGAATTTGAC CsCAGCTGCT GCTGcgTCTG CAGCTGCGTC TATGAGCGCC CGCGCGGGt	3840
cAAACGAGCC CGCGTGTGCG aGCCGATTTC AGCGATGGTG AGTATATCCG CGTCTGGGCG	3900
AAAACAACGT CCCCCGCACG TGAACATGGG GCATTGTACG CCAAACGCGT GATTGGTGTA	3960
TAGCTTTCTT GATCGGTAGG CAATCCTTGC CGTGGTTTGT ATGGGTAAGA GGCAGGTGCT	4020
AAGATAGTGT GCGCTTGTC A GACATCTATT TTTGCAGTAC CGTCGTGTCG GCCCTGCGGG	4080
TGCCGAGGAT GAACGGCATG TTGCGCACGA GCGTGTGGT ATGTATTGGG TGTCTCTCTG	4140
CTGCAATCCC TGCGCGCTTA nGTGCCCCGTG CGGTGCCGCC TCTCTCTAGT GCGGTGGTAG	4200
ATGAGGCGGC ACTCCTTTcT GTGCArGAGG CGCGTGGTAT TCGCGCCCTT CTA gAgGGcT	4260
TGCGCGCCCT TCTGGArATG GCTCTTCCAG ATCGCATCCT TCTCCTGCGC CTGAAGCTCA	4320
TGCGCGTACG CTCCATGACG GTACGCCGTT GCAGATAGCG GTTTTGATTG TTGATTCGCT	4380
CCAGGGGGAT ACTCTTGAGG ATTTTTCATT GCGTGTGGCT CAGGAGTGGG GTATCGGCAG	4440
TCGTGCGCAG GATACAGGAA TTGTGTTAGT GATTGCGCGC GCGGAnTAnA AGCACGCATC	4500

251

GAAGTAGGAT ACGGTCTTGA AGACCGCGTC ACCGACGTGC ATGCACATCA GCTTATCCGT 4560  
GGGACgCTCG CGCCGTGTTT TCAAGCTGGC GCCTATGCAC AGGGTGTGTA CGAAACGGTG 4620  
TTGCGTTTGG CTACCCTGGT GCGGGGTCAA CACGAGGTAC AGCAGTTCAT GCAGCCGCGC 4680  
TCTGTGCAAC cTGCGGTACC GCGCCGGGGT CCAGTGAGAA ATAGTGCCGG GAGCGTGTTT 4740  
TTCTTCCTGC TGCTTTTITA CTGTCTGGGG GGCCGGCTTT TGCCAGGGGG AGTGTGTGG 4800  
CCATTGCTGT TCTTCGGCAC TCGCGGGCGT TATGACCCGT TCGGGTCAGG GTTTAGCGGC 4860  
GCATTCCGGG AGTGGGCAGG GGATGGAGGA GGGTTTTCTG GCGGTGGTGG TCGCTTCGGT 4920  
GGAGGCGGGG CCTCTGGTTC TTGGTAGCTG CTCCTAGCAC AGCACGGTTT CTTTTCTGT 4980  
ACGGGCAGTC TCTCTGGAA GAGGTGTATC TATAGTGTGC TCGGTGACGC ACGGGAAAAG 5040  
CATAAGGAGT GAGAACAATG ACTGAAGAAG CTATGCGCGC GATGGCACTT TCCATCCGCA 5100  
GTTTGACGAT AGACGCCATC GAACGGGCGA ATTCTGGTCA CCCTGGTTTG CCGCTGGGCG 5160  
CAgCAGAGCT TGCTGCCTGT TTATATGGGA CGATCTTAAA GCATAATCCG GCGAATCCTA 5220  
GCTGGTTTAA TCGGGATCGT TTCGTCTGT CTGCAGGACA CGGGTCTATG CTCTTGTAaT 5280  
GcTGCGCTCC ACCTTTCTGG GTACGACGTT TCGCTTGAGG ATATTAAGAA CTTTAGGCAG 5340  
GTAGGCTCCC GGTGTCTGG CCATCCTGAA TACGGTTGTA mCCCCGGTGT GGAAGCAACA 5400  
ACCGGTCCAT TGGGTCAGGG TAcTCTATGG CGGTGGGTTT tGCGCTTGCA GAGGCAATGC 5460  
TTGCGGCAmG TTTTAATACT GATGAgCatG CCGTTGTAGA TCACCACACC TATGCGCTTG 5520  
TGGGGGAAGG CTGCCTTATG GAGGGCGTTG CCTCAGAGGC TTCTAGCTTT GCCGGCACTA 5580  
TGCGTCTGGG CAAGCTCATC GTTTTTTATG ATGAGAACCA CATCAGCATA GACGGATCTA 5640  
C 5641

## (2) INFORMATION FOR SEQ ID NO: 13:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8790 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

GGCAACAGAA AGCGGCGTAT GTCCGTCAGC GTCGCGTTCC TGGGTCGGGG GACCGAGCGT 60  
GACAAGGTGT TTGATCAGAT CGCGGTCCAG CGCACGCACG GCCCAATGCC AGGGTGTTTT 120  
GCCGCTTTTG TCCTTTTGTA GAAGTGCTT TCTGGTTACC AATTCGTGCG CAGTTCCcTT 180



ACGGATGGCG CGGGTAAGCG GAGTGTCTCC CTGTGCATCC CGCGAAAAGA GGCTCGCGTC	240
TCGTGCAATC AGCATACGAA CAGACTCAAA ACAATTTTCT GTGACCGCCA CCATAAGCGG	300
CGTACTGCCT GAAGCATCCT GGGCCTCAGT ATCGGCACCC ATAGAGAGGA GGAAGTCAAC	360
CACGTGCGCG TCGTTACGCA ACACCCCCAC GTGCAAAAGT GTATCTCCAT TTGCATCACG	420
GACGTTGACA GAATCTTTAC CAAAACGGGT CTTAGCGTA TCTAGATCAC CGCGCGCAAC	480
CATTTCAAAG AGATCGACCG AAGCCTGAGG AGAGGGAGAA GACGTAnTAG TGCAGGAAAG	540
CAAGACGAGG AAACACGCAA ATGTGCTCCC CACAAACCAC ACAATGCCAC GATTATGTAT	600
ATGCATGCAG CGGATCCTCC TGAGTATGGT GCCGCGCTCG TACAGTGTGT GTAAAAGCGT	660
ATCCTACCGG TTTCGGCGAT AAGGCACAGA ATCTTTAGAC GCCACTCTC CCGTGAGGAC	720
GCAACcGCGC AGGCGCGTTC CCATTTTAA AAACCCAGTA TCTGCTGACG GTGATGTAAT	780
CCGAGGTCTT TTAATGTGTC ACACACCTGC TGCTGAGGTG AcCGTGACG TGCCTTTGCA	840
AAATCACGCG CAAAACAATT CATTGAAAA TGTTGAAATA CAAAAGCGG CGTACGGCGG	900
TCACACCCG TTTGTAGTAA ACGCGCATAG GGTTCAAACA GATGTCCGCT TTTCAATTCG	960
CTGTAACCCA CAATCCACAG ATCACATCCT AACGATCGCT GCAGCTGACA CGTACGCCGC	1020
GCCATCCAAC ACTGGCTACG ATGCAAAAAT GACTGCACCT GCCGTGCACG CgCAGTTCTT	1080
GCTGGATCTT GCGCAAGGaG GCGTACCAGT GCACGGAGCT GAACCGTTTT TGCCGTGTGA	1140
AGCGGCGTTT TGTTCACAG CATCACGTCT GTACGAAAAT CAACCCCTAA CTGTGcATGC	1200
CGCGAAAAA AGCCCTGaGC CACTCGACCT GACTGTCTTA CCAGATACCG TTGCTGCGTA	1260
TGCaCTGGCT CCTCTTTCCC TGGATTGTCC GAAACCAAAA TAAGGGCCGG TACAGGATCA	1320
CTTTGGGTCA GTTCCTCAAG CGCGTGAGGG TACACAATCG GAGTGTGTAC CGGATACGTG	1380
GGTATTCCTT GTGCACGCAC GAGTGCCGCT TGCGCACGGT GCAAAAAGC CTGCGGCGTG	1440
CAACACGCcA CTGCAGACTG CGCTGCATGC GGTTCATAT ACGGATACCC AAACGCGCGC	1500
AAACTCTGTA CACAAAAGC CTTGAGGTCA GTGCGAAAAG CGGcGAGCGC ATGCCACTGC	1560
GACCGAGTcA CGCGCTcACA TcCAAAACAG AAAGCATCCT CTACTATACC CTACATACCA	1620
CGTCCCTTCC TACAGACTGc AGTGACGGCG CAGGCGCACT GGCTCAGTGC TTCCTCCAAA	1680
ACGGCGCCCA TTGACAAACC ACCATAAGG TCTCACGATT GGGCCTCTGT GTAGAAGAGA	1740
ATATCACCAT GCTGCAAAAA CGCTCAGATA CCTCGACCG TCTGCGTCAC AGTCTGGCGC	1800
ACGTTATGGC AGAGGCCGTT CAAGCTCTCT TCCCCGGCAC CAAGCTCGCG GTGGGCGCGC	1860
CTATCGATTA CGGGTTTTAC TATGACTTCT CACCTCCCCG TCCCCTGTGC GATGCAGACC	1920

TAGCCCCCAT	TGAAGAGAAA	ATGCGCGCCA	TCTTGCGTGC	GGGGTGTC	TTTGTCAAAG	1980
AGGTGGTTTC	GCGTCTGAC	GCGCTTGCTC	GTTTTAAAGA	CGAGCCATTC	AAGCAAGAGC	2040
TCATCGAACG	CATCAGCGCA	GACGACACGC	TCAGTCTCTA	CCACTCCGGC	GCGTTCAC	2100
ACCTGTGCCG	GGGTCTCTAC	GTGCAGTCTA	TGCGAGACAT	TAATCCGCAC	GCCTTTAAAC	2160
TCACGAGCAT	CGCTGGGGCC	TATTGGCGCG	GTAATGAGCG	CGGCCCCCAG	CTGACGCGCA	2220
TCTACGGCAC	TGCTGGGAA	TCTGAAGAAG	ATTTCACAC	ATACCTTCGC	ATGCAGGATG	2280
AAGCAAAACG	CCGAGATCAC	CGTAAGCTCG	GTCCTGCACT	CGGTCTCTTT	CACTTGGACG	2340
AAGAAAATCC	TGGCCAGGTC	TTTTGGCACC	CTGAGGGGTG	GACCCTCTAC	GTGGCCATCC	2400
AGCAGTACTT	GCGCCGCGTC	ATGCACGAAG	ACGGGTACGC	AGAGGTGCAT	ACTCCCTTTG	2460
TCATGCCCCA	AAGCCTTTGG	GAACGCTCGG	GGCACTGGGA	CAAATACCGC	GCCAACATGT	2520
ACCTGACCGA	AGcGAGAAGC	GTTCTTTTGC	GCTCAAGCCC	ATGAATTGTC	CCGGACATGT	2580
CGAAATCTTC	AAGCAAAAAA	CACGCAcTAC	CGTGATCTCC	CGCTCCGTCT	TTCGGAGTTT	2640
GGCTCGTGCA	CCCGCAATGA	ACCGTCAGGC	TCCCTGCATG	GAGTTATGCG	CGTACGTGGC	2700
TTTGTAACAAG	ACGATGCCCCA	TATCTTTTGT	ACTGAGGCGC	AAATCGCATC	GGAGGTCACC	2760
CGTTTCTGTC	GCCTCCTTGC	GCGGGTATAT	GCTGACTTTG	GCTTTGCACA	GGAGCAGATC	2820
CGCGTCAAGT	TTTCTACGCG	CCCAGAGCAG	CGCATCGGAG	ACGACGCCAC	CTGGGACCGG	2880
GCCGAACGCG	CATTGGCAGA	AGCATGTGAA	GCAGCAGGCC	TTTCGTACGA	GCACGCACCG	2940
GGAGAAGGAG	CGTCTATGG	ACCAAAGTTG	GAGTTTGAC	TTATAGATAC	ACTCGAACGC	3000
GAGTGGCAGT	GCGGCACCAT	TCAGGTAGAC	TATCAGTTGC	CCTCGTGCGA	GCGCTTGAAC	3060
GCAGAGTATG	TGGGGGAGGA	CAACCAACGG	CACATGCCAG	TGATACTCCA	CCGCACGGTG	3120
ATTGGGTCTC	TAGAACGGTT	CATCGGTATT	CTCATTGAAC	ACTACGGGGG	TGCATTCCCC	3180
CCATGGCTCG	CACCGGTGCA	GGCAGTGGTG	ATTCCGGTTG	CCCCTGCCTT	CCTCGAATAT	3240
GCGCAgcACG	TTGCACGGGA	GCTGTGCGCC	CGTTCGCTCC	GCGTGACGGC	AGACGTGAGC	3300
GCAGAGCGCA	TGAACGCAAA	GATCCGCACT	GCCCCAACGC	AGAAAGTGCC	CTATCTGCTC	3360
ATAGTTGGCG	AGCGGGAgTG	CGCGCGCacA	GGtAGCGGTG	CGTCCGCGCA	CAGGGCCCCA	3420
GCACTCAATG	GGGTCTCAG	CCTTTTCCAC	CTTTTGTGCTC	GCGAAcTAGA	GACGCGCGCG	3480
CTGCACGCCT	AGCCCATGAG	TCCCCTGTGC	CTTTTCCCCA	AACCTTCAGG	GGAAGGGACG	3540
CTATATCCGT	AGCTGCTGTA	CGCTACCGCC	GTAGAGtGCG	CGCGCGTGCC	GTTGATATCC	3600
TCACTCTTTA	CATAAGAAcTC	AAAGTCCATC	ATACGATCGA	TAATCCCGCG	CGGCGTAATT	3660

TCCACAATGC GGTTCGCAAC AGAGCTGACA AACTCATGGT CATGCGAATT AAATAAAATC 3720  
ACGCCGGGAA ACTGCACCAA CGCCTCATTG AGACTTGCAA TTGCTTCTAG GTCCAAATGA 3780  
TTGGTCGGCT CGTCCAATAT CAAAACATTG CTCCCAGAAA GCATTAAATT ACTAAGCATG 3840  
CAGCGTACTT TTTCCCTCC AGAAAGTACA CGCACAGATT TGAGCGAATC CTCGCCTGTA 3900  
AAAAGCATCC TGCCTAAAA ACCGCGTACG TAGGTTTCAT CTTGATCATC AGAGAATTGG 3960  
CGCAACCAAT CCGTGATAGA AAGATCACAA TCAAATACC GCGCCGTATC CTTTCCATA 4020  
TACCCAACAG ATACCGTCTG TCCCCAACGG AAAGAGCCgG CATGTGCCTG CTTTTCTCCA 4080  
GCAAGAATAT CAAACAATAT GGTCTTCGCG CGGTGTTCCTT TCGACGAA AGCGATTTTG 4140  
TCTGTGCGCC CAACTGTAAA GCTCATGTCT GTAAAAAGCT CACATGAACC TCCCTGCATT 4200  
CGGTCTCAG CGGCATAGCG CAGTCCATCG CACGACAATA CGTGATTCCC AATTTACGCG 4260  
CGTGGTTTAA AATGCACATA GGGAACTTT CGACCAGTCA CCTCAATCTC TTCCAGCACC 4320  
AATTTGTCAT ATATCTTTTT ACGACTCGtC gccTGCCGGC TTTTGGCTGC GTTAGAAGCG 4380  
AAgCGCAAAA TAAACTCCCT CAGGTCCTTC ATCTTTTCTT CACGCTTCTT CTGCTGATCC 4440  
TTAACCTGCC GCTGCATAAT CTGACTCATC TGATACCAA AATCGTAATT GCCCGAGTAC 4500  
AAACGAATCT TCCCATAATC GATATCGCAA ATATGCGTAC ACACGCTATT TAAAAAATGC 4560  
CTATCATGCG AAACACAAT CACAGTGTG GGAATTCAA TGAGAAATTC TTCCAACCAC 4620  
GCAATAGAGT ACAAATCCAA ACCGTTTGTC GGCTCATCGA GCAAAAGCAC ATCGGGATTA 4680  
CCAAACAACG CCTGCGCTAG GAGTACAGT ACCTTCTGGC TTTCGTCAA TTGCGACATC 4740  
ATCCGATCAT GGTGTGCCTC ATCTACACCC AACCCAGAAA GCATTTGTTC AATGCAATTT 4800  
TCTGCCTCCC AGCCATTCAA ATCCGAAAAC TCACCTTCCA ATTCTGAAGC CTCAACCCA 4860  
TCTGCTTCAC TAAAATCACT CTTTGCCTAA AGAGCTTCCC GCTCCTTCAT CACTCGATAG 4920  
AGCGCAGGAT GCCCCATGCA TACGGTATCT TTCACCGTGT GCTGATCGAA GGAAAAATGA 4980  
TCTTGACGCA GAACTGCGAC GCGCGCGCCG GATGCGATag cGATACTTCC CTGATGATGT 5040  
TCGAGTTCAC CGGAAAGGAC TTTTAAAAA GTTGACTTAC CTGCCCCGTT CGCTCCAATG 5100  
ACTCCATAGC AATTCCTGC AACAACTTT AAATCAACAC CTTTAAAAAG AGGTTTGTCA 5160  
GAAAAC TGCA CACTCATACC CGTCACTGTT ATCATGCGGC GCATGcTAGC GCAAAATCCG 5220  
TGcACAGGaC AAGCCGCTGT CCATAGAGCA TCACACATAC AGCGATGCTA TGAGCGCGTC 5280  
ACTGTGGAAG ATATACGTGC AATACACCTC GTTCATTTCT TACACACAAC TGTGcAGAGC 5340  
CCCCGTAGA AAGACAGGTC CCCAGTGTTC TCCTCACACG CTGATCATTT ATGTACACCG 5400

CACCGTGGCC AGAAAATACT GAAAGTGCAT AGTACGACTG CCTTCTCTGTA AAACGCGCAA	5460
CAACTGTGCC GGTGCGAGTA CCTATCTCAC TATTCCTTGG CAACGTACCA TCAAAAGATA	5520
GTGTGCCACG GTCCGTGTAT AAATGCGCGT CAGATAGGAC GCAGCGACTG CATTGCGTAT	5580
CACCGTCTGT CGTGTGCAGG AGAGTCCGAT CGGTACGTAC TCCATTGAGC TTTAGTTGCG	5640
TCGCGTGC GC ATACACATCT GcAAAACGCA CCTCAATACC TTCAAGCCGA AGACTGCTGT	5700
CTTTCACCCG CACTTTAAGA TTGTGCACGT TGTGctgCGC TGgCACACAA ATGATCGCTT	5760
CAATCGGTAC CACGCTATGT CCCCATCGGC TCCCCATAC GTTTTTTCAA AATGTGTAAA	5820
ACCAATCGCG CAACGTATCG CGTACGTTCA ACGCACTCTG CATTACTCCT GGGGAATCCG	5880
CTGGAGGCGT GGACTCCCGT ACTGTTTTCT TTCCACGCCG TAGGACAaGC ATCGTAGGAT	5940
CCAGGTGAAT CGATAGCGGA TCGTACACGC TGTTCTTTAC AACCTTGAT GCAAGAGAGC	6000
GCCgnTGC GC ACATACCTGT ACACCTCACTC GTACGCGAtA GCATCTATAA CAATGGTATG	6060
GGGATGTGCT TGATCTAGGC AGGTATATCC ATCTGCATCG GTAAAGGTAC GCACAACAGG	6120
TTGAGAACTG TCGCGGGGT GACGCTGCAT ACGGCTACTG GTCCAAAACC TCGATACATC	6180
TCCACGCAGA TACTTCATCG ATCCGCCCAA AAGATACGCA CACGCTAGAG AGAGCGCACC	6240
AACCAAACAA ACGATAACAG TGTGTGCACG CGCTTTTTTG TCCATTTTCT CCCCCTCACC	6300
TATTTCTCCT CTGTAGAGCC TTTCTCCGT CCTTAAACTG AACACCAGTT AGTGGACCAG	6360
ATTACGCCGC ATCAGTACAA TCGCGCGCAA TGAGTGGGA ATATCAATCT TTCACGCTCA	6420
AGCGTGC GC ACGcGTCTAT GACCAGTATA ATGTGATTAA CTCCCTTTCTG TTCGCACTCG	6480
TAACTGGCAA TACCATTACG CTCTATGCAC TGCTGCTTGG TGCCCGCAGT ACCACGGTAG	6540
GCTTGCTAAG CGCGTGCATG CACTTTTCTT TCTTTGCACT CCCTTTAGGA AACTTGTGT	6600
GCCGACGTTT TGGCGTCATT AAAACCTTTG CGTACACCTG GATCGCCCGC AATACTAGTT	6660
TGCTTCCAAT GCTCGCAATC CCTCACCTTT ATGCACAAGA CTATACGGCA CTTGCACTGT	6720
ATGTGCTTAT TTTTCCGTC GCACTGTTTA ACTTTTTTCG TGGTATGGGA ATGATCGCGA	6780
ACAATCCGGT CATCACCATG CTCGCACCAG GCAAACATCG CAGCTCATAC ATCGTACGCA	6840
TCTCGCTTGC GAACAACAGT GCCATACTCA TTGCCACGCT TTTACTCTCC GGGGcACTGA	6900
GCGTTAACGC TTCACTCACA ACCTATCACT TTGCAACTGC ACTCGGCATC GCACTAGGTT	6960
TTTTTGCTTC GTTCTCCTT TTCACATTAC CTACCGTCGA GTCATGCGAA CATGTGCAGC	7020
ACACTTCCCC GGAGACCCCA CGGACCTCAC CGCGCTCCGG GTACACCACG ATACTCCGTG	7080
CTCTGAAAGA GAAAACTTT CGCACCTTTA CGTTCGCTTT TTTTGTGAGC AGCTTTGCCA	7140

CAGGTACAGT	ACGCCCCCTC	GTTGTCGTAT	TCGCAAAGGA	CGTATACCAC	ACTCCAGATA	7200
GCTTTATCAC	TATCCTCACC	GTATGTGCAT	CCGGCGGTGC	ACTCATCGTC	GGTTTTATAA	7260
TGAGTTTAGC	TATCGATCGC	ATTGGGGCAA	AGCCAATGTA	CATTATCTCC	TCAGTTTTAA	7320
GTGTACTCAC	CCTCATCCCT	GCGCTTGGA	CGCCAGGACT	CCATTCTCT	TTCTTTCAA	7380
TTGCTTTTTT	ATGCCTGTTC	TGTGCAACTA	CCAGCATGGG	ATTTACCGGA	CAAGATAATG	7440
CAGCGCAGTC	CTATTTTTTT	GTCCTCGTTC	CTGAGGATGC	TTTAATAGAT	GTAAGTGTC	7500
TGTACTATCT	TATTTTGGGC	ATCACTGGTG	GAGCCGGATC	GGTGATTGGC	GGCGTGGTAT	7560
TAGACTTCTG	CCATCTCTCA	GGATACTCCA	GTTTGAGGC	ATATCGTATC	TTTTTTACAG	7620
GAGTCAGCGC	GATTATGATA	ATCGGCATCG	CGCTTCAGAC	ACAGcTGC	AACCTGGGTG	7680
GATACCGTGT	ATTGCGAACA	CTCGCAACGC	TTTGCTCTCC	AAAAGATCTG	CGTACTCTCA	7740
GCCTCCTACA	TAAACTCGAC	TTTAACGAAA	ATTTAGAAAC	CGAGCAGCAT	ATCGTACAAG	7800
AACTTAGTAC	CATCGCCTCT	CCCATCTCTG	CCGAACAAC	GGGCACCTAC	GTGCAATCGC	7860
CACGTTTCAG	TATCCGCGCA	AGCgcATTGC	AAGCACTGGA	AACGATTCCC	TCGCTGAGTA	7920
CACACAACCG	TAATCTTTTG	CTGCGAGAAT	TGCGCGAGGG	AACATTCACT	ACTGCCGCAC	7980
AGGCGGCACG	CATCCTTGGC	ATTCATATGG	TCCAGCAAGC	AATTCCAATC	CtGcgCGAAG	8040
CGCTCCATAG	CGAGGATTAC	CTGCTCGTCG	GAGAAGCGCT	TGTaGcGTTA	GCACGCACAC	8100
ACGATGACGA	AAGTCATTTT	CTTATTGGGC	ATGTGcTGGC	GCGCACGCAA	AATCCCTTTG	8160
TCGTGCTGCG	TGGCCTGCAA	GCGCTTGAGA	TGCTCAATTC	AGTCCACGCG	CTACCACCAC	8220
TGTTTGAGAT	TTTGCGCACA	ACGTGCAAAA	ATACACAAAC	GCACACAGAA	GCATTACTGA	8280
CTCTATCGGT	CTTGATGGGA	ATACAAAATG	AATTCTACTT	TCTATTTGAG	CGCTACgTAC	8340
CGGTCATACA	ACCGTACAAG	CGCTAGTACG	AGAAAACTA	GAAGAAAGTT	TTGCTATCAG	8400
CAGGGTCACT	GACGCGACAC	TTGAGAAAAA	ACTGGAACGC	TTTACGGCCG	ACGCACGCGC	8460
GGGCACCCAC	GTGGTCATGT	GGGTACTGGC	ACGCGCAGGA	GAAGACCTAG	GGACAAAAAC	8520
AGCACTCCTG	CTGAGTCTTA	CGTTGGAGAA	TCCCCTGTGC	GCGCGAGAGG	CTTTTCGCCT	8580
TCTGATAGGT	ACATGGACGG	CCACCTTGTT	TAGAAAACCC	GCACTCATGT	GCTCTTAGCG	8640
CTCAGACGGC	CCGGTGCGCA	CAACACGCCG	CAGGACGTGA	TCGACCGTGA	CTATCCCCC	8700
TAAAACCGAA	ATCGCACGGT	AGAAAGCGTT	TGCCCATCGC	GCAACACGTC	AAACCACACC	8760
TCCCTCgTnT	GACTGCAAGC	ACCGCGTAAA				8790

(2) INFORMATION FOR SEQ ID NO: 14:

257

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 651 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

```

nCCAnTCGCG GAAATTAACC cTACTAAAG GgAACAAAAG CTGGAGCTCC ACCGCGGTGG      60
CGGCCGCTCT AGAACTAGTG GATCCCCCGG GCTGCAGGAA TTCGATATCA AGCTTATCGA      120
TACCGTCGAC CTCGAGGGGG GGCCCGGTAC CCAATTCGCC CTATAGTGAG TCGTATTACA      180
ATTCACTGGC CGTCGTTTTA CAACGTCGTG ACTGGGAAAA CCCTGGCGTT ACCCAACTTA      240
ATCGCCTTGC AGCACATCCC CCTTTCGCCA GCTGGCGTAA TAGCGAAGAG GCCCGCACCG      300
ATCGCCCTTC CCAACAGTTG CGCAnCTGAA TGGCGAATGG CAAATTGTAA GCGTTAATAT      360
TTTGTTAAAA TTCGCGTTAA ATTTTGTGTA AATCAGCTCA TTTTTTAACC AATAGGCCGA      420
AATCGGCAAA ATCCCTTATA AATCAAAAGA ATAGACCGAG ATAGGGTTGA GTGTTGTTCC      480
AGTTTGGAAC AAGAGTCCAC TATTAAAGAA CGTGGACTCC AACGTCAAAG GGCGAAAAAC      540
CGTCTATCAG GGCGATGGCC CACTACGTGA ACCATCACCC TAATCAAGTT TTTTGGGGTC      600
GAGGTGCCGT AAAGCACTAA ATCGGAACCC TAAAGGGAGC CCCCATTTA G                651

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## (2) INFORMATION FOR SEQ ID NO: 15:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5338 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

```

TACCCTTTCT CCTTCAGTGC GTAtCTACAG yTATCGCACC AGACGCCACT TACAGCGTTG      60
GCGCGCCTTT TTGTACGCA CGAAAcTGCG TATGTGCCTG CTATCCCCC CACGTCTGCC      120
GTGAGCCGCC CTTACACCGG TATCCTCATA GATGCGCGCG GTTCTCTTCC TGTGCACGGC      180
GAATACGTGT CAGAGCCGCT GAGCGCATGT TTGTTCCCA AGATTGGAG CACGGACATG      240
GATTTAATCT ACGAAAAGAA TATGGTTCAC CCTGACCGTG CCAAGGCATG GGGTGTGGTG      300
CGGTACGGCT CGGTTTGGGA CGAGAAAATG TACCGAGACA GGATAGGTAC CACGCCCTTA      360
AAAATCATTG CGCGCGGAGT GTTTGGCCAG CAGCGCACGG ATCCTATCAT TGCATCAAAG      420

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GATGCAGCCC AGATCTTGGC GCGCCCTGAa GAACTTGCGT TTGCTTGCAG AAGGCAACGT	480
GATTATCCTG TGCACGAAG CAGCGCTGCG TGTGCACGTG CCGTATCCGC TTGTAGACGA	540
GCACTTTTAC TTTGCATACC ACGACGTAAA ACGCTTCCTA ACCGACGAGC GGTCCCCCGG	600
TGTCGGTGTT CGCTCTGGCA TCAATACCCT CAAGATCACC GTGTACGACG TGCCTTTTGT	660
GGCAAACCTC CCAGAGATTC TCGCCTCAGA AAAAGATCGG GTAGACGTGA TAGCAACCGC	720
ACTGAAAAAG ATGGGSCCGT ACACAAGkTT TTTAATTGAA GGCCACACCG CAGATTTACA	780
CCGCCCTCAG GAGGAAGCGG CGCTTCTGT AGCACGTGCG CACGCATGGC GCAGGAACGT	840
TCCAGACGTG GCATTGAGAT GACGCGGATT ACTACGGCAG GACACGGTGC GACAAAGCCT	900
ATCGCGCCAA GCGATaCGCA CGCGAACAAA GCCAAAAATC GTCGAGTGGA GATCACCATC	960
TTGcGCGATT AGTGCACGTA CCACGGAGCA TTCTCCGTGC CGGCTATTTC TCCCAAGTAA	1020
AGAGAACCTG CGATGACGTA CCGATGGCTT TCTGCAGTCA GGCGCAGTTA AAAGGAAGGA	1080
GCACTATGAT AAAGCCACGC GCGTATGCAC TGTTAGGCGT GTTTTTCCTG TACGCCTGTG	1140
CAAGCACACC ACGGGAAGAA GATGTACCTG AAAAATTAC CCCCCTGAC CTCATGCTGC	1200
GTGCACAGGA ATCCTACGAC GCAGGTAATA TAACGTGGGC GCGTTTTTAC TACCAAACGG	1260
TTCTCGATCG TTTCCCGAAC AATGAGTCAG CGGTCATTAG TGCAGAGTTT GAACCTGCGC	1320
ACATCCTTGT TAAACAGAAA TCCTGGCAAG ATGCCTACAA TAGGCTCATG TATATACTCA	1380
AAAAATATGA GGCTGCAGGC AGCGCACGCC TGCCTCCTGC CTACTACAAG CTCACACTCA	1440
TTGATCTGTC GCGGGTAAAG CCGCACTTGA ATCTTGAGAC AGCGAATACA AAAGCAACAG	1500
AATATCAAAA GAACACCAA GAAGAGCTCA AGCAACGCCA GGAACACGG CAAAAACTCT	1560
TACAAGAAG CACACAAAA ATGCTTGAGG CTCTCCATCA AGAAGAACT CCCGAACAGG	1620
ACGCGCGCGA TACCGCAAAA AAGAAGACAG ACCAAGAAGA ACACACCATG CGCAAAGCAA	1680
ACGCGCCTAA AACCAGGCG TCTGGAGAAG CACCCACCCC ATGAAGATCC TGCACACAGC	1740
GGACCTACAT CTAGGCAAAA CACTCCATGA AGTATCGCTT TTTGCGTCAC AGAAAAAAT	1800
GCTCGGCGAT CTGTGCACCC TCCTTGCGCA GGACAACTAC GCCGCGCTCA TCATCGCAGG	1860
CGACATCTAT GACCGCTGTG TACCTCTGCG AGAGAGTGTC AGTCTTTTTA GTTCTTTTTT	1920
GCAAAATATC AAACGGTCCA TGCCACGGCT CCCGATATAT CTCATCCCCG GcAACCATGA	1980
TTCTGCGCAA CGTCTCTCCT TTGCCCAGGA GCTACTTAAG CAGCAGGGAG TATTCAATTGC	2040
GCAGGATCCT GAAGAGAGCA CCCGTCCCCA TCTCCTCTGT CACGAGGGGG AAACAGTGCA	2100
GTTATTTTFA CTTCCCTTTC TCCACGCAGG TGCCTTTTCC TATCTTGaTG AGGAAAACAC	2160

CACTTGCTC	ATTCACACCC	AATCCGAAC	CCTTCAAGAA	GCCTCGCGTc	GCTTGcAGcG	2220
TGCAGTATCG	TTGGACACCC	CTTCTATCCT	TGTCGCACAC	CTATTTACCC	AAAAAGGTAT	2280
TAGCTGCGAA	AGTGAACGCC	CGTTTGTGG	CAATGCCGTT	TACGCTGACC	CACACTGGTT	2340
TGACTTTTTc	ACCTATGTTG	CACTTGGTCA	TTTACACAAA	TGTCAAAAAA	TCACCGAACG	2400
CATGTACTAT	TCCGGATCTC	CTTTGCCCTA	TTCGTTTGAC	GAAGCAAATA	CCCAAAAGGT	2460
TGCGCTTTCT	GTAGAGATTC	ACTGCAACAC	AAAGGGATTC	CCCATCCATG	TGACTCCCCT	2520
TCCACTTGAG	CCACTTATCC	CTCTTCGCAC	CATACGCGAC	TCATTCCACG	CACTATATAC	2580
CGGTGATCGC	TATCTCCTTT	ATCAACGTGA	TTTTTTAGAA	ATCACCCCTGA	CCGACCCGGC	2640
GCTCGTGAC	AATCCTATTG	GCCTTTTGAA	GCCGCGCTAT	CCAGGATTGC	TCAGTATCAA	2700
GCAGGAAAAT	GCGTTGCCT	TTGATATACC	CCCCCCTAC	TCCTCTAACG	AGGGGATAGC	2760
GCCCTGCACA	CACCACTCAT	TGCGCACACA	CTTTGATGTA	TTTATGCACG	AAGTAAGCCC	2820
CACTCCTGAT	GACAGAGAAA	AGGGCGCTCT	CTTTCAGGAA	CTTTTGTACG	AAATGCAACA	2880
GGAATTCTCA	TCGTGAAGCC	GATGCGTCTT	ACGCTCCACA	ACATCGGTCC	TTTCGTGGC	2940
ACCCATACAG	TTGACTTCAC	CGCGCTCGGT	CCTATTTTTc	TAGTGTGTGG	GAAAACAGGT	3000
TCAGGAAAAA	CCACTCTATT	CGATGCGATC	GCCTATGCCC	TGTATGGGAA	ACCCCTTGGA	3060
ACCCGTGCAG	AAGTTATCCG	CAGTCTGCGC	AGTCATTACG	CCGCACCATC	AGAAGCTGCA	3120
TTTGcTACGC	TGGAATTTTC	ACTCGGCACT	AAAATCTACC	GGGTACACCG	GACGCTGACT	3180
TGCACACTTT	CCCACAGAAA	AACAGAGCAA	CCCGAGCAGC	TGTATCTTGA	GCAAAAAAAA	3240
GGTCATGGAT	GGGAGCGTAT	TGCTTGTGCG	CATAAAAGTG	AAACTGAATG	TGTTATTAC	3300
GATCTTCTCA	AACTCAATAG	CAAAGAATTT	GAGCGCGTGG	TTATGCTCCC	ACAGGGAGAA	3360
TGTGCGCAAT	TTTTAAAgCA	AATTCAAAAG	AAAAAAAAGA	AACGCTGATG	AATCTATTTc	3420
CTGTTGATCA	ATATACTGCT	CTTATGGAGC	GAGCAAAAAA	AAAATCGCTC	CATGCCAAAG	3480
CAGTGCTTGA	AACGCTGCGT	TCGCAACTTG	AAACTCTATG	TGCGGAGTGC	ATGCCCGACA	3540
CATACCACGA	AAGGAAACAA	ACGCTAGAAG	CTGAGTTACA	GCACGCACGT	GACGCACTGC	3600
AGCAAACCCG	CATCTCCCAT	GCGTACTATA	CACAAAAACG	TGAAGCGCTC	GAAGCACAGC	3660
TAAAAAACA	ACAACTTTGT	AAAGAGCTGC	GTGCGCGTAT	AGAAACATAC	CGCGCGCAAG	3720
AACCAGTCCA	CGCGGAAACT	CAAAaGCGTA	TTGATCGCGC	GCGAAAAGCG	GCACCACTTn	3780
TGCGCACATA	AAACACGTCA	CCCAGTGCGA	ACAAGATGCA	CaGCGCATTC	ATGCAGAAAT	3840
ACAGGAAAgA	TGCGTTCACG	CGAACAATTG	CTCATGAAAC	GAAGTGCGCA	TGTCGCGCAG	3900



260

CAGTCATCCA TTGAAGAACA ACGCCGTCTA CTACAAACAC TTCATAGTGC GTGCATTAC	3960
ATTGAAGACG CGCATGACGT TGCCACGTCG ATACGCGACA TATCTTGTC GCGCACACA	4020
CTCACGCAGC ATATCCACAC GCTTGCACAA CAAAAACAA CACTTACCCA GCAAGAACA	4080
TCGTTGTGTA AAGAACTGGA TATACTGCAA AGAGAAGCGG GTACTATCGA TACTCGTACA	4140
TCTGCCCTTA ATGATTTACA AATTCAACTC GCGCATGCAA AGAAGACACA AGAATTGTCT	4200
CAGCGATATG CCGAGCTCTG TCGCGTACAG CAACATGCAC TGCACAATGT GAAAACTTG	4260
AGAAAATACA CGCACAAAA AGCGCGTATA GCACACGGG ACGTGAGCAG CTCCTTCAGA	4320
CAAAGAACA AATTCATCTC CAAGAAACCC GGACACACGC GGTAGTACTC GCGCGTCTCT	4380
TAGAGCATCA AGAACCGTGT CCTGTCTGCG GCTCTTGCAT TCATCCGAAT CCCGCACGTC	4440
AAGACATAGA TAATCTTGAA CCGTTAACCC GCGCATGCA ACGCATAGAA CAAACATACG	4500
CGCAGCTGGA AACCAGCGAG AAAGATGTGT ACCACATCCT CACCTCTGAG CGTGAGCGmC	4560
GTGCATCCTA CAGTGACAA ATGCAGGAAA TACAGCATTC ATTTTCCATT CTTACATCGT	4620
GTGATACGCG ATCATCCTGC GATATTCCAA ACGTGCAAAA AATTACCGTA CGTGTTTGG	4680
ATCTCACGGA AAAATTATCT CGTGCAAAAG ATATGCTCGC ATGCGCGCAA CACGCTTTAC	4740
TGAGAAAAAA ACAGCCTGAG CAGGATTTAC AGGATGTACG CGCACACCTG CAGCAATGCT	4800
CACAAGAGCT CGCAAAAAA GAAACAGCAC TCCACGCATT GCAAGAAACG CTTACACAGC	4860
AGCGCGTACG CATTCACGCA CTGTCCATAC GTTTACCCAA GGAATTGCTT GCATCGAACC	4920
TACTTGCTCC GCAAAAGATG CAGCATGAGA AGGAGAGTGT CGCCTATTGG AAAGAGATGC	4980
TCGCACACTG TCAAACCCCTT ATGCGAGAAT TGCACACCCA TATTGAAGAA TACGACCGAG	5040
AGTTCAATGA GATAGAAAAC GCTTCTAGTG CGCTTGCGCG CGACATTGCA GCGCGAGAAG	5100
ATGCACTGAA CCATGTTCAA AAAGAATACA TGCACCTTGC ACGTACCGTG TGTGCGCAC	5160
GAACAGAAGC GCATTTtCAA TAACAACGAR GAAGTAACCG CCGCTCTTAT GACTGATGCT	5220
GAACTTTCTC ATGgCTGCAG CAGAAATTCA ATTTTCAAT GAATTGCGTG CGGCTGACAC	5280
CCATCTACTG AAAACACTCG AGGGCAGAAA TAGGAACAGA AATCCATCC GATCTTGA	5338

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32768 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

CCGCGCAAGA TCCCAGCGTT GATATCGCTC CAACCCCTTA ATCACCACAA AGTTCAAGGG	60
AGGGAATACG CTCCCGCGGT ACCCCATCCC CCGCTCATCA AACTCTGCTT CATCTGCAGA	120
CAAACCTCGGA ATCGGATGGT CCAGCCCAAA CGTGTGAGGA TTCACCAGAT GCTCTGCCAA	180
GCGCTCTGCC TTGTCTTCAT TCGGTATCTC CCCAAGCATA GGCCAGAAGC CAGCAATAGT	240
CTTATGCGGA AGCTGCTGCC CGGAAGCGTC GAGGTCTGG TAAAAGCCAG TACTCGCGTT	300
CCACATAAAA TTATTAATAC GTGTCTTTAG GGTAAAATAT ACCCGCTTAT ACTGAAAGCT	360
CAGTCCCTTA TCGTTGATAA TATCGCCGAG TGCAGAAAGA TAAAAAGCGC TCACGGCCAA	420
GGCAGAGTTA AAATCTACCA GATAGGCAGC TTTTTTACGT GGAGAGTTTC CCATCTCCGT	480
AGCAGCAAGA GGAACCCCTAT AGAGTCCGTT ACTCCTTCTA AACTGTGTTT CAATCCACTT	540
CATATAGCGC ACCATCACGG GCATGATCTC TTTAATTTCGT TTTTATTG CAGTTTATG	600
AAAGAGATTA AACTCTGCCC AGGCAAAAAG AGGCATGCCA ATACCCTCAG GATTGGCGCG	660
AGGCAAAACT GGCTCTTTCG TTGCAAGATG ATACTTCCAA CGAATAGCGC CGGACTCCTC	720
CTGCATTGCA TAGAAAAAAT CAAGACACTG CGTGATGTCA TAGTTCCGGT TCGAATACAC	780
GAAGAAAAAG GACGCAAATA TGATTTCATG CTGACTGATA ATTAATCCGT CTTTTTCTGG	840
AAACACAAAA AACGATTTCG TTGTGTTTTT CTCCCCGAA GCAGACAGCC AATACTCCTT	900
TATCCAAGCC CACGTGCGAT CATAGATGTC AACAAAATCC TGATCATAAA AATGAATCCT	960
GGGAAAGTCT CGCTTATTC CCGCATCTCC TCACACATCA CAGGCGACGG AGTGTAGCAC	1020
ATGCaGGGGA AAGTGAGTAT CTACCTTTCC ACCCTGTAAG CTACGCGATG TGCACACCGG	1080
CATCCAGACG AACTAGGATA GTAAGGTGTC AGAGGATAAG CTGGCACGTA ATAATTCACG	1140
CGCCGTACGT TCTTCATCAT ACGGTTGCAC GGTGTGCGCA TAAATAATTG AATGCTCATG	1200
CCCCTTACCC AGCAGCAGCA CAAGGTCCTG CGCACGCGCA AGAGAGAATA TGTGCCGAG	1260
AGCAGCGACA CGATCCGGAA TCAGAAACAG GGTTTTACCC AATTCTTGT GCTCACAACC	1320
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271

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TGCTTAGGGG TGGCAAAAGA TCGCACACAG GTCCGTCCAT CCTTCTCCTG GCAGTTGCTT	27960
GTCCATGCCG TAAGAGGAAG CGTATTTGAC CTTGCCCTGC CAGTGTGTAT TAGCCTGGGC	28020
TATTTTTCG GTACGCTCAA CCTGCTGCAG TCGCGTCGC TGACAACCTCT CCTGGCTTTT	28080
GTATTAGGTA CGTGGGTGCG CAGGGATTTC ACCGTGAAGG AAgTTGCGCA ACCGCCCTTG	28140
AGAGTCTGCC TATCGTCGGT GGCATTTTAA TCATTGTGCG AGCAGCGAAG GGGCTGTCTT	28200
TCTACCTGGT GGATGCAAAC GTACCGGACA CCCTCATCGC GTTCTGCGAG CATGCAATT	28260
CATCAAAGTA TCGCTTTTGT CTCCTTTTGA ATGTACTGTT GCTGGGTGTC GGGTGTATCA	28320
TGGATCTGTA TTCGGCGATC CTGGTAATTT CTCCCCTAGT GTTACCCCTT GCAGTGCATT	28380
TTGGGGTACA TCCGGTGCAC GCGAGCGTCG TTTTCTTGAT GAACCTTGAG CTAGGTGCGC	28440
TGACCCCGCC GATTGGAATG AACTTGTTCA TCGCGAGTTT TGCATTGAA AAACCGATTG	28500
TGTATCTCAC GCGCGCTATT GCACCTTCT TGCTAGCACA ACTGGGAGTG CTTCTTCTTA	28560
CAACTTACAT ACCATGGCTC AGCACTGCAT TCCTGTAGCA CCGCGTTCCG GCCACAAGTC	28620
TGAAAAAGTT GAAAAGAAAC GCCGAGgca TGCTGCGATC CCCGTTTTAT GCGCCGGGTG	28680
CAGCctCCCT GCGGGGATT C AATTGTCTGT ATACCTTTTC CGCCAGGCCG AATCCACCCT	28740
GCGCGGCTAG CTGCGCACTA AAATGCTCAT AGAGGGCGTC TTCGTATAAC CTTCTGAAA	28800
AACTCCGTT ACCTGCAAGC GTCTGCCCGC TCAACGTCTC GCGCATAGAC TGCACCATCA	28860
CTCTCACAAA CAGCGTTTCA AGCTCCCGAG CTTGAGTGTA CAGCGCATCA TTCTTTCTG	28920
CAGAACAGGC AGCACCTTGC TCGCGCaGGA aCAAGCGTGC CGCGAAAGAA CCACTACCTT	28980
CCATTTTCCC TGTCTTAGAC AGGGTAACGG AAGGAACAGA CTGCATCCCC AATGACAATA	29040
CACGGTGCAC GTTCACCTTT CAGTCTCCTA ACGCTTGAGC GCCACTGCTG TGCCGAGCAT	29100
GTGTCACTC GTTTGAATTG CTTTGAATT AAACTCATAC GCACGCTGGG CGACAATCAT	29160
GTTCACCATT TCACTTACTG TAGACACGTT TGACATTTCC AAAAATTAT GCTCAACCTT	29220
TCCGAATCCT TCAAACCCG GCCTTCCGGG AATTGGCTGG CCGGACGCAG gTGTTTGGGT	29280
AAACACATTC CCCCCCTCTG CTGCAAgcCC CGCATTTGTT CCGAAGNaTa CAGCTCAAGC	29340
TGTCTACCT CAACCGGATC TCCCTGTTCC CCGACTCGCA CCGTAACGCG CCCATCCTTG	29400
CTAATAGCGA TACTGTGTTT TACGTAGTTT TCGGGAAAA TAATCTCTGG AACGAGACGC	29460
AACCCGTTTG AGGTCACCAA TTGcCGctCC GCATCCACCT TGAACGAACC GTCGCGGGTA	29520

TAAGCATAGG TTCCGTCATA TTGCAGTACG CGAAAAAACC CCTCACCCGC AATAGCCACA	29580
TCTCCGCTCA CACCCGTGTG CTGGAGCGAA CCTTGTTCTGA AGAAGmGCTG CGTTGcAGCG	29640
AGTTTCACCC CGTGCCCCAT CCGTACCCCA ACAGGGGTAA GTGTGTCCTC AGTTGycAGG	29700
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CCGTTTCATCC CCGTAGCAGC GGTCCACAAA tTCGTACCAT TCACACCTCC CTCTCACTcC	29880
GCTACACGCT ATGCTCGTCT ATATCTTCTT TACATTCTAT AAAACATGCG GACAACTACT	29940
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GCCTATCTAT GGGACGTACA TAAATCTCCC CGTTTTGATT GATCGTATAG TATCGCTCCT	30300
GCAGAAAAAG TGGACCATTT TCTCCCAGTA CTGGATACCC ATTTTtagTC ATAAGGTAAC	30360
CTTCTACACC GACTAGGAAA TTCCCATTCC GGGTGTACTC TTCTCCCTGT GGAGTCCTAA	30420
TCACAAAAAA ACCCATCCCC TCAAGCGCAA TATCCGAAGG ACTTTGCGTT TGTTTAAGCG	30480
AACCTGCTC AAATTcAGTG AACAGTTCAT TCACCTCAAC ACCGAGGCCT AACTTTCCAA	30540
CTATAGGAGA AACGTCCGAA GAACCGAAAG GGTTCtTCAC CACACCATcG TCGTTTACAC	30600
GACGCAATAG GAGCTCTGGA AAACtCTTGT GAAGTGTAC ATCTCGCTTG TAGCTTGTTG	30660
TGTCTACATT CGCTAGGTTT TGCGCAATAG CATCCAGCCT GCGCTGcTGC GCGCTCATGC	30720
CACTGGCTGC GGTATACCAC CCTCGGATCA TACGCCCTC CGCTCCCCCT GGTATCGGGA	30780
GATAGAAAAG GGGAATCAAG AAAATCTTTT TGTCAGTGTG ACTACTTTTT TGATATTcAC	30840
TGAGCAAGTG CAATAATAGG ATCGAGTCTT GAGGCCTGCA GCGCTGGTTT TAATCCAAAG	30900
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AAAACAAC TGTTATCCCTC TGGAGAAAAC ACGGAAAAGA GCCCATAACT GAGCACCATC	31020
CCAAGAATAA GGCCACACAC GCACCCCGCC AGGnTTAAAA GCACCGCCTC GAGCAAAAAC	31080
TGCTGAACTA TTGTTGCGCA CGTCGCACCG ACGGCCTTGC GGAGACCGAT TTCTCTGCGA	31140
CGCTCGGTTA CGGTACTAC CATAATGTTT ATGATATTTA TGCCACCGAC AATCAGCGAG	31200
ACTGCAGCCA CAACCGACAG CACTACACTC ACCATACTCA GAACGCTGCG AAAACTTTTT	31260

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AACTCCCGGA TACGTTTTTC CGCTGCGGCA ATAACCTGCA CATCGCGTAC GCACACCTCC 31380  
ACCGCGTCTG CCACACGACC TGCACCCATT TCTAGAGAAA TAAACTCACG GGGGACAAAA 31440  
ACCCGATACG AAGGAATGCC ACTAATCAAA CTCCCCTTTT CCTGCAAGAC GCCTACGATT 31500  
TCAAATGGGA AAGACAGTGC ACGTTCTGCA CCCGACGCCC GGGAAAGTAT GGTCACAGTC 31560  
ATACGTTTAC CCAATGCATT CCCTTCAGGA AATAATTCTT GCGCAAGCAA ACCGCCAATC 31620  
ACCGCACAGT GACGATGGGT CTTAAAGTCC GCTGGAGAAA AGAACGTCCC ATACTCAAGC 31680  
TTAAAACTTT TTAATCCAG CCACCGCGGC TCTACTCCCG TAATGTTCCG TTCCTTTCCC 31740  
CCTGTGTGAG GAGAAGAAAT AAGTGCCTTG AGGGAAGAAT TGTAAACAC TCCCTCTATA 31800  
TCCTCGCTAC TTTGTACAAG TCGCGTCCGA TACGACTCAG TCGGCTGAAA CATGATTTCG 31860  
TTCTTCACAT AATCCCACTC TGGCCTGACT CGAATGAGTC GGCGCTCGCC CTCGCCAACA 31920  
CTCTGGGCAA GACTCGCGTA GAGAGACTCG CCGATCGAGG TAATTACCAC TACCGACGCA 31980  
ACCCCTACCG CAATACCGAG GAACGAAAGG GTCGTCCgCA GCACACGCTG CCTGAAATAC 32040  
AACAGGTGT TcACGATATC TTCAAGCATA TCCCTCTTTG CAGAGCcCGT yGCTCTACGC 32100  
GCGCGCTCT CCCCTCCTAC AGAAACCTGA CTTACGCAC ATGGCAACGC CACAGGACAG 32160  
GCACGCGCAC ACACATCGCC TAGCGGTCTT CCAAAGACTG GATTGGGTCA AGACCCGCGG 32220  
CTTGGAATGC TGGATACGAC CCAAAACACA CCCCAATAAC TACTGACCCT GCAAAGGCAA 32280  
TAAACATGCC GAcTACGCTA GGAGAAAACG TCATTTGAAA ATCAAACGCA TTCAATCCGG 32340  
CGATAACAAT CACGCTCAGT AAAAGGCCAA GCACAACGCC GCACAAACCA CCTACGAACG 32400  
TTAACGTGGC CGATTCTACC AAAAAGTGAT GAAGCACGTG CATGCGCGAA GCACCCAGTG 32460  
CCTTCCGCAA CCCAATCTCC TGGCGTCGTT CGGCGACCGT CACCAGCATG ATGTTCATAA 32520  
TACCGATGCC ACCGACAATC AGTGAAATAG CTGCGATGCC CGTCAAGACC ATATTCATTG 32580  
CCCGGAGAAA ACTCCGCATC TGTTCAACGA TAAGATGGAG GGAAGAACT TCAAAGGCCT 32640  
TCTCGTTACC GGTCAAGTTG GTTAGCACTG ACTTAACTTT GTCTCAACA TGCGCGATCG 32700  
ATCCAGAATC GTATACTTTC AAATCCATTG CATCGGCAAT ACGCCGAGAG AACTCTCTTG 32760  
TCAGCmmA 32768

## (2) INFORMATION FOR SEQ ID NO: 17:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8642 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

CGGATACCCC GCAGTGGGCG CCGTTGCCGC CCCCCTCGC TTGGACCGTA CGACAgTGA	60
CGTCCGTGCC GTCTAACACG TAGAAGCACC CCTTTCATC GCTCGTGAC CCGAGGATGG	120
GGGACGTATA GCGGTAAACG TGCCGTCTT TGTGTAGGTG CAGCTCGTCC CCGAACTATT	180
GCTTTTGGTG TACACGGCCT TGGTGGTTAC CACGTACCCG GTTCCGGAGC CCAGGACGTT	240
TTCATCACTT CCGTTTAA TACCACCATC GGAAGAAGAG CCGCTCCCTC CGCCTCCACC	300
GCCTGAGGAC CCAGAGCTAA GTTCACAGGG CATTTGCAAA AAGGGATTGT CTGACCCGCC	360
AATGCGGATT GCCCCATTG TTTTGCTAA AACGGTTGAA GGCGTCGTGG TCCCTCCCGT	420
TCTTCCGGCG CCGTTGCTGG TGTACGTGTA CACACCTTCC CCCGAAACAC AGGCGTACAC	480
GCACGCGCCT TCGAAACAAT GCTGGTAATC TTTTGCCTG GCAAAAAATT TACTGCCGTC	540
CACtTCCCCCT CAGACTTGCT CGCGTCCTTT TCCCACAGCT GACCGGCGCA GGCGTACAGC	600
TTGTtATTGC ACTTTACCA AACCCTCACT ACCCcGCGA TGCTCGGTAT TTTTAACGGT	660
AcTtCTGACT GGATGGAGGC AAAAATGCCa GAAAAATCGC AGCCGGTTAA GAGACTTGCG	720
CTTAAAAATA ACACCGCGG ACAGACTATG CGGCGCACTA CGCGCTTGC GCCGTCTGTG	780
TGCGCGCGGC ACGCCTTcGC CGCGgCACAG CCTcCACCTG CTtGGACTAC AGCTCTTTCC	840
AATCCTTTCC ATTGTtCCCC CCTATTACTG CCTCATGCA GACGTGGCAC GTCCCCGCTC	900
CTATCACAGG CACAGAGACC CCCCTACCA AAACAAAGCA CACTGCAGCC CCCCAGGCC	960
GCTATCCGCG CCACCGGGG GGGGTATCG GAGGTTCGCG CGCTTCCtCC TCCGGTTGTA	1020
CCGTtTCTG AGGAGAGACG GCAGATGCTG AAAAGGGTTC CCCTTCCCCA CTTTCTAACC	1080
AGAGACGGTT AACCgCAAAC ACCACACACA ACAGCAACGT CAAATcACGA yTGAGCGGCA	1140
TCGTGCCGCG CTCAAtCGCG TsGAGyTCTT CAAcACCAwT CCCAAGTTCC CGCGCAAAAG	1200
CCGTCTTACT TAAGTtTTGC TCACAGCGAA CGCGCTcAAC ACGCACACCC ATGCcTTCCA	1260
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CTTAAGTTGT ACAAGGCACT CCCCAGCCGC GGCAGCAAGC TCAGCGCGT CTCAAACGCA	1500
CGTGCGCCTG ATCGTACTTT TGcTCGGTGT GCAATAGCAG TCCGTAATTG TTCCAGGTAG	1560

CACCGTTCTT CGTTTCCAAG CGGATGGCGT GCTCGTACGC ATTGCGCGAA cCTCAGTGTC	1620
CCCCATATCG TGGAGCACCA CCCCAGCAT GTTCCACACC GCCGCGTGAT GAGGGGTGCA	1680
CCGCAACGCA TGATACAGCG CACCTGCTGA ATCAACCGTA CGCTTGAGCG CATAATAGCC	1740
AAGCGCCAGG TTCAACCACA GAAGCCCGTT GAAAGGACTG AGCCCCAATC CCTTGCGTAA	1800
ACAGGCAACG GTTTCCTCAT ACCACCCCTT GCGCGCGCAG GAAAGCGCAA GACAGTTCAA	1860
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CCCCAGCCAG TCAAAACCAC GTCCCTGcTA TCGCGCACAC CCTGCGCACT GCAAGAGcTG	2100
CGCAACTTCC TGCAGCCTCA TGGTGCAGAA TGCTCCGGGC CTCAGCGGTC CTAGACGCAC	2160
CCTGCCAATG CGCACCCGCA CTAAGCGCAC GACATCTGT CCCCACGCCT CGAATACCAC	2220
ACGGATCTCG CGCTTTTTC CCTCAACCAG TACAAGCTGT ACACACTGCG CTGCAAGATG	2280
CCGCGCGCGC ACGCACCGAT ACCGGcACCC TTCCACCCAC ACCCCACGCA CAAAAGAGCT	2340
CAACAGCGCT GCAGGGACTG GCTCACGCGT TTCTACAATG TACTCTTTCT CTATTCCsGA	2400
ACGCGGATGG CCAAGAGCmT GCGCAAACGA ACCATCATTT GTGAACAGCA GCGCGCCTTC	2460
AGACCGCACG TCCAGCCGGC CGATGTGATA TAGGCGCTCC TGATACGCAG cTGTAATAA	2520
TCGATTGCAC GCGCGTATTC CTGTTTGGAC GGGCCTGCCC GCACCTGCGT GTGTGCATAC	2580
CCGGCAGGAA ACTGCGGCGC GAGGGAACAG ATATATCCAA CCGGCTTATA CAGGAGCACG	2640
TAGCGCTGAA CTCGTTCAAG CTGCACGACG GTGCCGTCCA CACACACCAC ATTCTGCGCA	2700
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CGGAGGCGAA AAAACGGCTG CAGGCGGCAC ACCCTCCCTT GCACCCTCTG TTCACCCGGC	2880
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GCTGCGCAAC CGGAACGCAG TCAAAAATC CTCAGTCGTG CCATACTGCG CCGGCTTGCC	3000
GGGTATGTCC TTTTTCCTCA CCTCGCAAAT CAGACGGCGC TCACTCAAAA GGCGGATCAT	3060
TGTATCTGCA CCTAmCCCTC GGATTGCCCTC TATTTAGCA CGCGTCACCG GCTGCGCATA	3120
GGCCACAATA GACAGCGTTT CCATTGCCGC GCGCGAAAGG CGCCCTTCGC TCCGCTTCCC	3180
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CGCGCAACAC	ACTCACCCAC	TGCCTGTTCG	CTCAAACCGA	GCTTTCGTGC	AAGACACGCA	3360
TAACTGAGCC	GCACGCCTTC	GACAAACAAA	ATAGCCTCCA	GwAGCGCAAG	GTCCGGTGCG	3420
GGTGCTCCGT	GTAGCGTGCA	AGGCTCTGCT	TGGTCCATCC	TGCCgATGtA	CGCTCTTTCC	3480
tCCCTCCTaC	AAGCACCCAA	TGCAATCTAA	CGACAGGGAA	GACGGCACCC	GCcTGTCTGA	3540
cTTCCGTTAC	GGATTAAAAT	GACCGATCTC	CGGCGCACGC	ACCCGCACCA	ACGCAAGCAT	3600
CTGyTGGGGa	TAcTGCCTa	CAAACTCTTC	AAGAGTGCTC	AAACGCGCCG	CTTCAAAAAC	3660
CTCTACCTGA	AATCTCCCTG	ACCGATCGAA	ATACGGCAAA	AACACTGCCG	CACGCTGGTA	3720
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GTTCCATAAC	TGCAAGATAG	TAAAAGAGCG	CACGCACATA	CCCGGTCTGG	TATCCTGCAT	3840
GCGGCAAGTA	CCCTAGGTAC	CGCGACGGCC	CAGCCGCAGT	TTCACCCCTGC	GTCACACGGG	3900
GAGGAACAGC	ACCCGCAGcG	TCGACGGGGG	CGCAATACCC	GGATGCCGCG	CCTCCTGCTT	3960
TATCCTCCCT	TTGGGGACAC	CCTCCACTGC	AAAGGGTTCT	ACCGTTACGT	CCACACCTCC	4020
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TATCCAGTCA	ATGCCAAAAA	AGGGTkCGCG	TGCGCGCTCA	TGCGCCGCGT	TAAAATGAGT	4140
ACGCGGcATA	GTCGTCTGcT	TTTTTAGCGC	AGACAGGTAC	ACTCCCTGaC	CGGCAACCGG	4200
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CTCCCGCGGC	ACTTGGTCCA	CACGCAGGGC	ACGATAATC	TCTTGGTCAC	TTTGA CTGCT	4320
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GAGCCGGTAA	CTCCTGCGCT	TAATGATACT	CGCCATTGAC	TCTACTGCGC	TGTAcGTGCG	4440
CGGCGGATCA	AAAATACGCC	ACGGCACCGC	ATGcTccGTA	AGCGCCCGCA	GCTGCAAAAG	4500
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GCGCCTCGAG	CGCGAGGTGC	AGCCGAGGCG	CCGCTGCCAC	TGGCGCAGAA	TGCACACCAT	4860
CCCTTGGGGC	ACGATCAGCT	AAAAGAGGCG	TAACGCGCAC	TGCAAGTGGT	CGGTTGCGGC	4920
AATCACGTAC	GCCTCAACGC	GAAAGcTATT	GCCCGTTTCG	TCCGTGTAAc	ACGAGgTGCA	4980
CGCArCGCAA	CACGAGACGG	CTCATCCAAA	AACCAATCtG	CGCGATAACA	CgNCnCACAT	5040

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ACCACAAGAC TCTGCAGCTC CTTTTCTGGT GCGTTACGAT GTGCGCACCG CTCGCTGGAC	6000
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TGCCGCGTGC ACTCCCCAGC GCCTGcACCT TCCGACGGcG TCCAcTTCTT CTGaTCATCA	6300
CAGCGACCTG cACGAATTGC TTGTGCATCG CTTGCTTGCG CGCGTACCTC TCTCTCCCCT	6360
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TGCTCTATGT CCTACAAATT CTGTAAGGAC CCCCACGTCA GGTGCCGACA CTACGTTGGC	6780



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ATCGCACGAT	TTACTTCCCC	GGCACCCACG	AATCTGAACC	CATTTGGGTG	AAAGTTTCAC	6960
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GCAAGCGGAG	CACTCATCGT	CCTGTGTATT	TTAGGGAGAT	CAGCCTTGAG	CCGGGGGAAA	7140
GCTACTCTTT	TGTGGAAAAT	GTGAAGCATT	ACCTTGATGT	GCAGTCGGCA	GGGTGTACT	7200
TTCTAACCCCT	TCTCTTCTAC	CCCGAACTGA	AAAGGGAGCG	CACCGGTGAC	GAGGACCATC	7260
TGGCATCTAA	TACGCTAACT	CTTGAGGTAC	AGCCTGCCCC	TGCTGCGGCG	GCGCTCGGCG	7320
CGTTGCCGGT	TTCTCCCCCC	GTGGGTGAAG	TTCTGCAACC	GCAACGTCTT	TCCCCGGATA	7380
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TGCTACGGAC	GCGGAGGTTT	GCGTGCTTGA	GTGGTTTGAG	TACCGGGATT	TCCGGGAAAA	7680
GAAGCGCTTT	ACCTATCACC	TGTCCTCCCG	CGACGGCATC	TGGTATGTAC	ACGATTACGT	7740
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GAgCGCGCGT	AATCCTGCTA	GTGAACACTC	CGTCCTCCTC	TCTCAGCGCG	CGGCAGGTGG	8040
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ACAATCTGCA	AGAGCAGGAT	GTACTCGAGC	ACTGTGCGCT	AAAGGTAGCA	CACGACATTC	8340
TCGGTGTTTCG	CTGCTCGTTC	CATTTCATCGG	ACGGGCGCAT	CCTGCTACGT	TTTATAGATC	8400
CCGATGCGTC	ACTGGTACAT	GCAGTACGCA	GCGTCACAGG	TACCACATAG	CAACGGTACC	8460
CACACACACC	CCAAGCAAGC	AAATGGCTGC	GTAGACCCAG	GTGGGCAAGG	CCTCTTCGGC	8520

285

ACGGCGGGGG GCTCctTCGG TGCCGGGGGG CTGCCCTTTC TCCGGTTCTC GTTCCCGAAC 8580  
 GCATACCCAC AGGAAGGnCA GCCCTTTTCG AAGTCTCTAG CGTTTCCTGC GTGTTTGCAC 8640  
 AA 8642

## (2) INFORMATION FOR SEQ ID NO: 18:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6761 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

TTCTCCATGT TATGAGATTG GACTCCTCGT TGGAAACGTT CCTTTCAGAA nAGATAGCGT 60  
 TAACCGTGGA TTCGtATCA ATATTGACGC TCTCTCTCGA TGAACAAAGA CAAGTTCTGC 120  
 AAGCGGTCCG CACCGTTTTT GTTCCACAC GACAGGAGGG GTATATTCCC GTGTGCTAA 180  
 CGACGGATAC GATTCGTAGC GCAATGTGGA ATTTGTTTTT TTCAGATCGT ATTGAAATCG 240  
 CAGTTATGTC CTATAAAGAA GTTCTACCG ATATGCGTAT TGAAACAGTG GGAGTAGTAA 300  
 GGATAGAAGA GAGTGATGTG GATGCTTTTG TGAGAAAGCA GTAGTCTTCG GGCACAAGAT 360  
 GGGTGGAGGG TTTGATAGGT GGAGTTATTA GTAGAAGTTG CCCCACGAA GGAAAAAGCG 420  
 ATAGAGAAAA TTCGGA AAAA GTATGGAGAT cGAGTTAATA TCCTGCGCAC GCAGAGGAAT 480  
 AATAGGAGTT TCTTTTTTGG TCTCATAGAA CGAGTCTCGG TAGAGATTTT TTTTCTGTGTC 540  
 AATAGTGGAT CGCAATCATC AGTACACGAG ATACCCTCAG TGCAATCgCG TACGctGTGT 600  
 CCGCTGCTCG GGTAGAGGAT ACTGAAGCAG AAAAAATAAA GATACTTGAA TCTGCGCAcG 660  
 TATTAATGCG AaGATAGCAC AGCAGGTAGA GCCCTTAATT TCAGCGGCAA AAGAGAAGAA 720  
 AACTGAAAAA GTGCCAACTT CCCCTGAAGC GGTGCATGCG CTCACTCAAA CGCTAGAGGG 780  
 TATGATCCAG AAGATcACGA ATAGTGCGCC GGTGGTGATA GCACAGGAGT TGCAGTCGAT 840  
 TCAAAGAATC GAACTTCTTT TAGAGGAAAA TGATTTTAGT TTTTCATTTA TAAGAAAAAG 900  
 TATTGCTCGT CTAAAGGACG AACTCAGTTA TCATGATTTA GAGTCTTTTCG AAAAAGTTGA 960  
 ATCAACAGTC CTGCGATGGA TTATAGAATC AGTCCACATT CAAGTTCCCC CTATTGTGAC 1020  
 CGGAACAAGA AACATTGTAT TAGTAGGACC GACTGGTGTG GGAAAAACCA CTACCCTCGC 1080  
 AAAGCTTGCC GCGTTCTATT TTGTTACAGA ACCGAAGCGA ACTGGTATTC AGCCACGAGT 1140  
 AAAAATCATT ACAACGGACA ATTTTCGTAT TGGTGCAGCG TTTCAAATGG AACGTTATTG 1200

cGAGCTTATG GGACTCGATC TGTGTGTAGT GCAAGCACCG GTTGAGTTTT TGACGTACAT	1260
GACACTGTAT CAGCAGGAGA CCGATGTGGT CTTTGTGGAC ACGGAAGGgA GGAGTCCGGT	1320
TGATGGACAG AATATAGAGC GGATGGTGGA ATACTTtCGT GCGGTAAAAA ATTTtGAAct	1380
GGAAGTGTAC CTTACCATtG ACGctGGATC GAAGGCGAAC GACTTGCGCG AGGTGTTTAA	1440
GCAATATGCG CTTTTgAGTA TCGTGCGCTG ATAGTAACCA AACTtGATGA AACAACAAGT	1500
ATTGgAaACC TCATTAGTGC GTTGAGTGAG GCAAGGACTC CTATCACCTA TATTACGACA	1560
GGACAAACGG TTCCAAGCAA TTTAGAAAAG GCGTCAGTAA ATTTACTACT TTCTAAATTA	1620
AAAGGTTTTA AACTTCTTGC TGAGGAGATG GGCAACGACT ATGGTGATTA CGGTAGCAAA	1680
GAGAGATAAG CGCATAGCAG ACCAGGCAGA AGAGCTGAGG GATTTGATGC AGGAAAAAAA	1740
TGCGCGGGAG CtGTTGAACG TCATCAGCAT AGAACGCGTG TTGTCGTGGT AACCAGTGGA	1800
AAAGGCGGGG TGGGAAAGAC GAATATTGCA ACGAATATGG CAATTGCTTA CGGGTACATG	1860
GGGAAAAAGG TGGTACTCAT AGATGCAGAT CTTGGACTTG CAAATGTGAA CGTGATAATG	1920
AACGTTGTTC CCCAGTATAA TTTGTACCAT GTGATCAAAA AGCAGAAGAA AATGTCTGAT	1980
ATCATCATCG ATACTAATTT TGGTATCAAG CTCATCGCTG GTGCATCAGG GTTTTCCAAG	2040
ATTGCaAATT TAAACGAAGA AGAGCGTGCA GCTTTTATCC AAGAGTTATA TTCTTTATCG	2100
GAGACGGATA TCATTATTAT CGATACAAGC GCTGGTGTTT CGAAGAATGT CGTAAGCTTT	2160
GTGTCATCTG CCGATGATGT CATTGTTGTG ACCACTGCCG AACCTACGGC AATCACCGAT	2220
GCGTATGGAA TGATAAAGAT CATTGCAACT GAGGTTGATA ATCgGGATAT GAACCTGAAG	2280
ATGATAGTAA ATAGAGTGAA TTCTGCCgCA GAAGGAAGAA GGATCTCTGA ACGCATGATA	2340
CAAATTGCAG CTCAGTTTTT AAATCTGAAG TTAGATTATC TGGGCTTCAT TTATGACGAC	2400
ACcTCGGTAG GTGCGAGCGT TCTCAGACAG GTCCCTTTTT TAATCCACGA GCCTCGGGGG	2460
AAGGCCTCCG TGTGCTTGCG CCATATCGTG GCAAAGCTGG AAAAAACAGA GATCGCCGAG	2520
ACAGGCGGGC TTTCAGGTTT TATTGCGAGG ATATTTGGAA GGAATGGGA ATAAGGCTCC	2580
CCCTTTCCCT ACCGACTAAG ATTGATGAGA AGTTGGACCT CCCCCAGTGG CTTGCCGGTC	2640
TTTTCCGCAA TGAACCTCAGG GGCAAGTCCC TTCTCAGATA GGGCGATGAT GGCGTCTTTA	2700
AGCAAAGGGG ACTCAGCTCT CAGCCCGTTG TCCCGAATGA TTTTCTCGTT ATAAACCTCA	2760
ATGGTGCCAC GCTTGGTAGG GGTGGGTTTC GCTGCACTCG ATCCTGCGCG TGAAGGAGCG	2820
CTCCGGTGCT CAGGTCGCGC GCAAACCTCC TCCCGAGTCT CCTGCCCCGC ACCCGATGCC	2880
CTGAACAGGG TGCAGCCGT GTGCTCCTTA AGTATTTCTT CGTTAAGAAG AGTGAGTTTT	2940

CTGTCGATCG	TGCGGACGAC	CTGGTTACAC	TCTCCTATCT	TCTTCTCGAG	CATTTGCACG	3000
GCAATGTCCG	CTTCATACCG	TATATCTCGA	ATCATCTTTA	TCACTTCCTG	TTGCATCGTT	3060
TTCGCATAGG	CGTCAGGAGA	AAACTCGTA	CGCACCTTCA	CGTAGAAGTA	CACAAGCAGA	3120
GCAACGGCCA	CGAAAGAGAA	CGTAATCGAC	ATCACCAGCA	TAGCGTATTC	CTCATTTTCG	3180
CTGCGTATAA	GGAAACTTAA	GTACGCATAA	CCTGAAGGGG	CTCTTTTATA	ATCTTCATCC	3240
TGTTCCGCCC	TGTATTGGCC	ATAGCGAATG	AGGCCATTGC	GTAAATAAAA	ACTTATGGCC	3300
GTGCTGTCCG	CGCGCACCTC	TTCGCTCAGG	TCTCGAATGG	TGACTTTTAC	ACCAGAATAC	3360
ACCTGTCTCT	AGGCAGAGAT	TTTCCCCCTC	ATTGGAGAAG	CATCCAAGGA	TGCCTGAATC	3420
TCTTCGAGCT	CCGCGCGCGA	CTGCTGCACT	AGCTGCTCGA	GTGAGATCTT	TTCTTCATGC	3480
AGACTAGTCT	CAAGCGCCTC	CTTATCTGGG	GGAAGTTCTT	TACGCGCTCT	CTTTAAATTC	3540
TCGAGGGATT	GGAGGTTCAA	AGACAGATCG	GAGAGTTTTC	GTTTCATGTC	GTGCAACTCT	3600
TCCTGCAACA	TGCTGAGGCG	ACGTACACGG	TGCGGATCAA	AGCCGACGCT	GATTTGCGTG	3660
TCGTTGCCGC	CTGATTGGCT	GCCTAGGTTG	CGCGCGTAGA	CAGCCTCTGC	CGCTGCAACG	3720
TTACTTCCGA	TGATGTCGGC	ACGCCGCCCA	CGACAAATGA	TTTTCGGGTT	AGCAATGACG	3780
TGCGAGTTCA	TAATTCCGTC	AGAAACAATG	ACAAGATCTC	CTGCTTCAAC	TGAGGCGCAA	3840
TTCTGGATGA	ATTTAGCCCA	CAGAGATTTG	CCTGCACGAA	CGCATCCTTC	CTCCTTTCCC	3900
ACAATAcCTT	GTCCGACTAG	AATGTCCCCT	TCTGCATCAA	GCAAGGCCTT	TCCCACCGTT	3960
CCGCGCACTT	CGATGTTGCC	TGAGGCCTTA	ATCTCGTAGT	TATCCTCAAC	GTTTCCGTGT	4020
ACCAACACGG	TACCAAGGAA	CATAATGTTT	CCTGTTTTTA	CAGAGACGTT	TCCTTCTACC	4080
ACATAGATGG	GTTCTACGTT	GATGCCCCCT	cGGGAAAGCA	GGGCTTGTCC	GTCAGTTTCT	4140
GCAATGACCG	TAAGGCCGTC	aCGCGCAAGc	GCTGTGTTTC	TTCCCAGAGG	AATGGACACA	4200
TCCTTTCCCG	ACTGTGcCGG	AAGATACGTG	CCCGTGACGG	TTTGTGCCAGG	AGTACCCCGC	4260
TGTGcAGGCa	GCTTCTGCGC	AAGCGGCTGT	CCTTTGACCA	CGTTATGAAT	GAGGTTTAAC	4320
TCCTTAAAGT	TAATCTTCCC	CGTCTTGAGC	TCTTGCAAGT	GCACACGGgT	GCGGTCAGTT	4380
TCGAAGTGAT	AAGAAATCCT	CGCATTTTCA	CCGTCCTTTG	GAGGGGTGCC	CCGTGCAACG	4440
AGGTAGGGTT	CATGGTAAAC	CGGACAGTCT	TGGAACGAAT	TGACGCGTTC	CATGTCGATG	4500
CCGTACACAA	CCCGATTGGA	GCGCAAGAAA	GACAAGATGG	TGTCCGCGCA	TATGTCAGCG	4560
CCGTTCCGTC	CAGGGGGGGT	GGCAGTTACA	AAGGCCTTCA	TGTCGTTTTT	TCGGATCTCC	4620
ACAGAAAGCA	TTGCATCATG	TGCAGGGATA	CGTTCGAATG	AAGAAACGTG	CACGTAGCTG	4680

TTCGTAGCGT	TTTTTATCAG	CACCTTGAGA	GTGTCAGCGG	GAGGCAGGGC	AAGGCCGCGC	4740
GCGCGGAACT	TTTCCTGGAC	GCTGGCGAGT	GAAACCTTGC	GCCCTTTACC	GAGGGGAGCG	4800
GTGATTTTTA	AAAAAACGCC	CTCTTTTGTG	CAAAGTACAA	AnGCTGCGCC	GTCGTGTCCG	4860
GTGTTGGGGG	AAGAAGACAC	GTCCCGGTGT	GAATCGTGCG	GTGCAGACAC	GTTCCCGGCA	4920
GCGAACTCCA	GTGAAGAGCT	CTCGTAGGCG	CGGATTTTCC	ACTTTTPTTG	GCGGAAGGAA	4980
AAGAACTGTC	CAGCGCCTCT	TTCGAGCACC	TCGTATTCAA	CGCGGTATTT	CGGTATTCCT	5040
AATTGAACAG	CAGCAGCCTC	AAGTGCCTTA	TCAAGTGTTC	TTGCGCACGC	ACTGACGCAG	5100
ACACGCTTAG	AATCCTCCTC	GTAGCGTTTC	TGCATATCGC	GGCGAATTTG	ATCAAAGCGA	5160
GTATTCATAG	GGAGTATTAC	CGGATACCCT	TTTTGATGTT	GGTGAGCTTT	GCCTTTAACT	5220
TTAAATTCGC	GCTGGTGTGG	ATCTGAGAGA	TACGCGACTC	GGTCACTTTG	AGCACCTTGC	5280
CAATCTCCTT	TAAGGTCATT	TCTTCGTAGT	AGTATAGTAT	GAGCACCTGC	TGCTCGCGTT	5340
GAGAAAGTTC	CCTAAtTgcC	TCTGcgAtGa	tAcGctTgat	TTcCtCgcgt	TcgaCaATGA	5400
CGTCGGGATT	GAGAGAAGCG	GGCGCTTCGA	TGCTGTCTCC	CACAGAGACG	TGGTCTCGCT	5460
CATCTCCACC	AAACTTCGAA	TCGGCAAGGG	AAATCACGCT	CGTGCCGGAC	ACCTTCAAGA	5520
GGAGCTGGTG	GTACTCTTCA	AGCTCAATAT	TCAGCGCGCA	CGCGATCTCA	GTATCTGTGG	5580
nCAwsACcCC	AAGGCGTGCC	TCTAGATCTG	CAATCGCTTC	TTCTATCTGG	CGTGTTTsTG	5640
ACGCACCACG	CGGGGAACCC	AGTCGATGGA	GCGCAGTTCA	TCAAAGATAG	CACCGCGGTA	5700
TGGCGTAACC	GCGTACGTAT	TAAATCGAAT	GTTTTTTTCT	GGGTCATATT	TATCGATAGC	5760
GTCAAAAAGA	CCAAAGATAC	CGTAGCTTAC	GAGGTCATCG	AACTCAACGT	TCCCCGGTTT	5820
CCCAACGGCA	ATTTTGCTTG	CAACGTATTT	GACCAGAGGA	GCGTACTGCA	CAACAAAGTA	5880
CTCGCGTATT	TTGCGCTAC	GnkTCCTCCG	ATACTCGAGC	CAAAGCTCCT	CTTCCGACTG	5940
CTGTTCGAAG	GCTGTGTTC	CCATTCCCCT	GCCCTCTACT	GTTATAGCTG	ATTTCAGAAT	6000
GAAAATACAA	GCCGGCTCGC	TAGGTGTCTT	GGGAGAGCAC	GGTTCGGATG	GCGCGTGCCA	6060
TGCGTTTAGT	CTCGGGTAGG	TCAGTGAGAA	CGTCACCGAC	GAGATCAGAG	GTCTTGTCTT	6120
CGAAGGAAGG	AGTAGACGGG	GAGAAAGAGT	ACCCACGCTC	GCCGAGCTCT	CCTGTAGGGA	6180
TGAGCGAGTC	AAAGCTGTCA	TCAGTTTCCT	GTACGACATC	GCCACCCGGC	GACGCAAACG	6240
AAGGCTCGAC	CACGTCATCT	AGCGTCAGAT	CCACATGAGG	GATGGGCATC	TTCCCATCTT	6300
CTTGAACAAG	GAGGTGCGGA	ACCACATATG	CAAGAAGGGC	CCGCAGCgcG	TACGCGGTAA	6360
CTCCTGCGCC	TAAAGCAAGG	ACAGTCGCAC	GGGCGACCGA	CACATACACG	CGygCGcGct	6420

acCGCCGCTG TTGCAATGGA TAAAAAGAAC GCAGCGCCAG CTGCAATcGC AGGTACCTTC	6480
AAGGAGGCAC CAACTGCAGC ACAGGAAAAA CGCCGCTCCT GCACGTCCAC GGAGCTAGTC	6540
TGCAGCTGGT TTTTGTTC GTCAAGGACC TGTTCCTCAAG CGTGTAGTGT GAGCTATGCG	6600
CGGCACACCC GCATACCACG CGGTGAGTGG TGTGCCGTGC AGCGCTTGCA CGTGTACACA	6660
GGTGGCAGTA CAATTGGCCC TCTCTTGGAG GGGGAGTATG GGTCGTTTGA AnCGGTGTGA	6720
GGTTCGTCGC CGCCCGTGC CGCTTTGGGC GATCGTACGC n	6761

## (2) INFORMATION FOR SEQ ID NO: 19:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19217 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

AGTGTCCGTT TTGTTTGGCG TGGTGTGCGA TCATAGTTGT AAAAAAGCTCC ATGCATACTC	60
GAGCGTCATC CTCTGCTCTG TGTGCTGcGT GTACCGTAAG TCCAAACTGA AGTGCAAGAT	120
TCTGCAGACG GTACTGATGG CGTCCTAACC CGGGGAACAC CGCTTGGGCC ATCGCGTACG	180
TATCAACTAC TTTGTGAGAC AGGGGTTGCT TTTTGACAG GCTGAGTTCT GCATTGAGAA	240
ACTCGACATC GAAGTTTGGC TTATGTGCGA CGAGTACTGT CCCTTTGATG AATCGAGAAA	300
AGTCTGAAAC TATCTCACAA AAGCGCGGCT TATTGACGAG CATATCGTCG GTAATATGGT	360
TGATTTTGCT CACGTCAGGG GGTATAGCCC GATCAGGGAA GATGAGCGTG CTAAAGCGCG	420
CAATAATACC CTTTCGATCA AACGTTACTG CACCAATTC TATAATGCGA TCTTCTCTG	480
CTTTTAAACC AGTTGTTTCG GTGTCGAAGG CGGTGAATGC AACGTGTTCA TGCACCGCAA	540
AAACCAATC ATATATCATT GCAGATATGT ACCCATCTCT TGTTCAACTG CGGTGATAAA	600
CATGTTGCCC GCCTGTTCTG CTTCTTCTAT CGAGGTACTG ACGGTCAGAG GGTGGATGAT	660
ATAACACTTT ATTTTTTGTT CTGTTCCACT CGGTGCTATA CTTACAATAC TGCCATCCTG	720
TACAAAATAC TGCAGCACGT TACTCTGAGG AAAAGAAAGG GCAGATGTCT GCGCAGGATT	780
TTCTGGACTA AACTCAACAC CAAGATATAT ATCCCTCACC TTCATTACCC GCTTGCGCGC	840
AATTTGGGTT AGCGGCTGTC TCCTGAGCGT ATTCATTATT GCATTCATGG TGCTTACACC	900
CGCGACGCCC GCATAGGTTT TGTTTCAGCGT CTTTTACAA AACAGGCCAT GCGTCCTGAA	960
TAAGTGGTGA AGGCGATCGA TCAGGCTCAT TCCGCGCAAC TTCCAGTACA CACCCATTC	1020

TGCACAGAGC	GCTGCGGCGT	TGATACCGTC	TTTGTCTCTC	ACCTGAATAC	CAAAATTGTG	1080
TCCGTAACCT	TCTTCAAATC	CATATACGTA	GGAGTACGCT	CCTGACTGTG	AAATCTTTTC	1140
TGCAGTACCA	CATATCCATT	TGAATCCGGT	AAGGcACTCT	ACACACGTTG	cGCCATATGT	1200
GCGTGCTATA	CGGTCGCTAA	GTGGGGACGT	AACAACGGAG	CGTACAATTG	CAGGACGCGC	1260
GGGCATATTG	TTTGTTCCT	GCAGGGTTAG	CAGAATGTAG	TCAGTGAAGA	GCGCTCCCAT	1320
TTGATTGCCC	GTGAGCAACT	GCAACACACC	GCGGGTGTTC	CTTACTGCAC	ATGCAAAGCG	1380
GTCTGCGTCA	GGATCAGTCG	CCATAAGAAC	CTCAGCATGT	ACGCGATCAG	CATATGCACA	1440
CGCATGCACC	AACGCGGCCG	GATCTTCTGG	ATTAGGAGAC	GACACCGTAG	GxAGTTCCC	1500
ATCTGGCAAC	CGTTGCTCAG	GCACGGTCAT	AATGGAGAAC	CCCATATCCC	CCAGTATGCG	1560
CTCGACGTGG	AGTGCAACCG	TCCGTGTAA	TGGGGTGTAT	GCAATACGCA	TCGACTGGAC	1620
GGTCTCTTTC	GTAAGACCGG	GGCGAAAAG	CTTTCTCTTT	ATAGAGGTGC	AGTACGGTTC	1680
ATCAATTTCT	GCATCAATGA	TCGTGGGTgC	ACTGCGTTTG	ACAGGTACCT	TTTCTCAAG	1740
GTTACGACA	CTCGTGATAG	CGTTCATTTC	TTCGGTGATA	TTTTTTTCGT	GAGGATGCGC	1800
TATCTGTGCC	CCGTGCTTCC	AGTACACTTT	GTATCCGTTA	TACTGCGGTG	GGTTGTGCGA	1860
TGCGGTGACC	ACGATGCCCA	CGTCACAGGT	AAGATACTGT	ActGCGTAGG	AAAGTTCTGG	1920
AGTCGGGCGT	GGATCCGAAA	AGAGGTAGGC	GGTAATGTCA	TGTGCAAGAA	ACACGTGCGC	1980
AgcAGTGTGT	GCGAACAGAC	GAGAATGTAC	ACGCGAGTCG	TAGGCTATAA	CGGCACGGaG	2040
CGCGCCGCGC	GCTGcCTTTT	CAGGAAAAGT	TTTtagTAAA	TAGAGCGCAA	TCGCGTGCGT	2100
GATCTTTTTG	ATCATGAAGG	GGTTCATTCT	GTTTGTTCCT	CCGCCGACAA	CACCCCGCAG	2160
CCCGGCGGTG	CCAAACGAAA	GAGTTTGCAA	AAAgcGCTCT	TCGAGCTCTG	CTATATTATT	2220
CTGTGCAACA	AGATCCCGTA	CCTGCTGTGC	AAAGAAAGGA	TCTGTTTCTT	CTTCAAGATA	2280
AAGACGAGCA	CGTTCGAACA	ATTGACTGGA	GTGCATGAGC	GCTTCCTCAC	CTTTAAAAGT	2340
ACTGGACTAT	TTACGGCACC	ACAGGATAGA	GGGGCATTGT	AATGGGAAGG	TGCTGCTCTG	2400
TGCAATGCTC	ACAAAAAGTG	CATGTCTTGA	AAAAGTGTA	CAGAGCCACT	ACACTGGTGC	2460
GCGTGGGTTT	TGCTGTTTCT	CCGAAAGTTT	TAAAAGGCTT	TCGCGATCTT	TTACCGGATG	2520
AAGAGATTGA	GCGTGCAATTG	CTCGTAGAAA	AACTGACGGT	GGCTTTAAGA	CAAATGGGTT	2580
TTGTACCTAT	CGATACCCCC	GCGTTGGAGT	ACACCGAGGT	TTTgcTGCGC	AAAAGTGAGG	2640
GTGACACAGA	GAAGCAGATG	TTTCGCTTTG	TTGATAAGGG	TGGAAGAGAT	GTGGCCCTCC	2700
GCTTTGATCT	TACGGtGcG	CTTGCGCGGT	TCGTTGCAAC	GCACTATGCG	CGTTTGTATT	2760

TTCCCTTTTAA	GCGCTATCAT	TTTGCAAAAG	TGTGGAGGGG	CGAGAAGCCT	CAGATGGGTC	2820
GTTATAGAGA	ATTCACGCAG	GTGATTTTGA	TATCGTCGGT	TCGGATTCCG	TGTGTGCTGA	2880
CTTTGAAATT	CTAAAGTCGA	TACGGCACAT	GTTGTATATG	GCTGGTGCAG	AACACATACG	2940
TATTCACGTT	GCGCATCGTG	GCCTGTTTGA	TCGTTTTTTG	CGTGCTCTTT	CTTTGTCTGA	3000
CCAGGCTGAG	CATATCCTGC	GGATAATTGA	CAAACGTGCA	AAGATGGCGC	CGCATGTGTT	3060
GACAGCTCAA	CTTGAGTCGC	TTTGCGATCC	AGTTCGTGTG	CAAAAGATTA	TGACGTATGT	3120
AAGTGGGGG	GAGGTGGACG	GTGTTGCGCC	GTCGTTTGAA	CATACATTGT	CTGCCATTGA	3180
GACATTGACA	GGGGGTGTCT	CGGAAGAGAG	TACACGGcTT	AGAAAAATAT	ATGAGCTACT	3240
CTGTGCAGTG	AACATTCACT	CCTCTTATGT	GTTTCGATCCA	TCTATCACGC	GTGGTTTGA	3300
TTACTACACC	GGTATGGTGT	GTGAAACGTT	TTTAACACAG	TTGCCTCATA	TCGGTTCGGT	3360
GTGCTCAGGT	GGGCGCTATG	ACCATCTGAC	GGCTTTGTAC	ATGAAGGATG	CAGTGAGTGG	3420
GGTGGGTGCA	TCCATTGGGT	TGGATCGCTT	GTATGCAGCG	TTTCAGCAGT	TGGGAATGTC	3480
CCGAGAGCAC	GTTTGTTTTG	TGCAGGCGCT	TATCTTCTGT	CAGGATAGTG	CGCTCATGGA	3540
TGTGTACCAA	AAGCTGTGTT	CATACTTTGC	AGTGCAGGTG	GCGACGGAAG	TCTTCCCTGA	3600
TCCGCGGAAG	TTGAGCCAAC	AGTACGCCTT	TGCAGAGAAG	AAGGGGATTA	GGTGGGGGAT	3660
CTTTGTTGAA	CAGCGCAACG	CCGTGGTGGA	GGACTGCCTG	CTCGTACTGC	GCGACCTTTC	3720
TACGCGAAAG	GACACACGCC	TACCTGcGCA	CGAAcGgACC	GnCATGGgCA	GCTGAAGGGT	3780
AACAGGCGCC	CCCGCGACTC	TAGAGTCGCA	TGTTACTCAA	TTCAGTGACT	AGGTCCGTTA	3840
TGGAATCCTT	GTTCTTCTGT	CCGATTTTCAG	TGATTGAGGA	AGCATACTTT	TTAACCTGTT	3900
CTGAGTTTTT	GTGCATGGAC	GACACGCTGC	TGTCGATTTT	AGACGTGATG	CGCGAAAGGG	3960
CTAGCATCGC	CTCCTCTACG	TGCTTGCTGT	TGTCCAAGAT	GGCGCCCGAA	TTTTCTCTGCA	4020
ACGTGCGCGT	GATCTCGGTG	ATGTGCTGTA	TAGCGTGCAA	CACGTGCACA	CTGTCTTTTCG	4080
TCTGTCTTAC	CATCGACTGG	CTGATCACTT	CTTCTTGGGC	CTTTATGTCT	GTGGTGATAG	4140
AGAAAATCAG	CGCAAACCTGA	GCCTGAACTG	CAAGCGCGCT	CTCAGAAACC	TTTTCAATTT	4200
CCGTTTTTAC	GTCCCGCAGC	ACTGCGGAGA	TATGCTTTCC	CTGTTTCGAA	GCGTCCTCTG	4260
CGAGCCTACG	TATCTCACTC	GCCACTACTT	CAAAACCCTG	ACCTGACTCT	TTACAGTACG	4320
TTGCTTCGAT	TGAAGCGTTC	ATTGCAAGCA	AGTTAGTTTG	ACTTGCGATG	TGCTGAATTA	4380
CCGCACCGGC	TTAGCCCAAC	GCTTCTGAAG	CGTGAAGCAC	TTCTCTTCCC	ACATCTGCAG	4440
ACTGAATAGT	TGCGTCCTGC	GCTAATTTTG	CCTCAAGCAG	CAGGGTTTCA	ATGACATTAC	4500



TATTGTCCGA	AAGTACCTGA	GTAACCTGACT	CGATGTTTCT	CACCATCTGC	TCTACGGAGG	4560
AGGCGGCATC	TGTTACCGTA	TCTACCTGCT	CGCCGATGTG	ACCGTTAAAC	CGATCGATGT	4620
TTCCGACAAT	GTGCTGCACG	TGCTTTTGTG	TTTCAAAAAT	GGTACGGGAT	TGGTGTTTAA	4680
TTTTGTCTTC	TGCCTTGTGT	GCTTGGGAAA	TGATCTCGTT	GATAGCGGCG	CAGGAAGTGC	4740
GCGCATTTCT	GACAAAATA	TTCGCGATTT	TCCGAGCGCG	TGCCATCTTT	CCACGGGATG	4800
CAATGAGAAA	GAAACGCGTG	CTCTTGTCGA	TCTTGTTCAA	ACTTTGGGTG	AGGAACCCAA	4860
ACTCATTTCT	ACGCACAACG	CGCATACTCG	CTGCGGACGC	ATCTCCGCTC	AACCTGTTTT	4920
GGATAAAGGT	GAGGATGCCT	TGTTTGTCTA	AATCGAGGTG	TCGGCCAATC	CTGATCATGA	4980
CGATTACGCT	GAGTACGCAG	ATTAAAGACG	CGCACGGGAG	GTTATGGGTT	ATAACCACAT	5040
GTGCGAGCTC	CTGCTCACCG	TGCAGAGGGA	GTAGGAGCGA	TGAAAAGCCC	ACGCAGAACA	5100
TACTAAACAA	ACCTGAAACG	AGCACGACGG	ATATTTCTCT	TGAGAGGGAG	TAGTACCCGA	5160
GGCGTGCTCT	GCGCAGGGGG	ATAAAGTGGG	CCCACTCCTG	CAGTGTGTAA	AAGAAAGGAT	5220
GGTGAAAGAA	GGGAATGAGG	CAGAGCGCTG	CGCCACGCT	GCTGAGGTAG	TAGGACAGCA	5280
AGAGCACATG	GCTTGAGGAA	AAACCGACTT	CTAGGGCAGC	ACACACCGGA	TACACCACCG	5340
CAGCTACTGC	AGGAGGCAGG	GGAGAAATCC	ACGTGTACCG	CAGAAACGCA	GCCTCTGCAG	5400
CTGCGCTATC	GTTTTGATGT	TTCTTAACGG	ACATGAGGAG	AACGTAgTAG	AGCGTCAgcG	5460
AAGCACCCAG	CATGAGCGCC	AGcgCACAGA	AGAAGGAGAC	GCTGGTGAGC	AGAGCGgAGA	5520
GCATACTCCC	GTCTATGACG	CCTGCGATAT	AGGCTACGAG	AGAAGTCGCC	GGCACCCACG	5580
CAACGCTCAT	CACGACGGCG	CGCCGCAGCA	CGGCGAAGTC	GGAGACCGCA	TGTTCACTGT	5640
TCATAGGTTA	CTCCATGGAA	AGGTGGACTA	CAGGCGCAGc	TGGGTGAGCT	GGTTCGTAAG	5700
CATGTCCATT	GCATTCTTAT	TCTCTGAAGC	GATAATCTTG	ACGGAGGTGA	CCGCATCCAA	5760
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 CCTGcTTTAT TCCAGGTGTG GTAGTCTTTG CCGGGTTATC CGAGACTTTC ATGACTGGCA 18960  
 GCCAGTGTGC ATCGTCCCAG TGGGGGAGGC GTTGGGATGC TGcATGCCCG GTTTGAGTGT 19020  
 GCGCCGGCTG TGTCGTAGCG CGTGCACTCA TCTTGTAAC TCCGGTAAAG GCAGAGTCTG 19080  
 CTCCTCCGGT TACCAGGTGT GTGCCTACAC CCCAAGCATC GATGGGAGCA CCGCTTAAAA 19140  
 CTAAAGATTC GATGATCGTC TCATCCAGCT CATTTGAAAC TGCAATGCGT GCTTCGGGCA 19200  
 ATCCCGCTGC GTCTAGT 19217

## (2) INFORMATION FOR SEQ ID NO: 20:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3496 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

AAAGCATTG CAAAGACACG TACTGAGTTG GGACAGACAA TAGCAGCTGC TTACCTCGCA 60  
 TCAAAGGATG TGTTAACCGT GGGTATTGGA CTTGATATGT ATCAAACAAA TCAGTATTCA 120  
 GCTCTTTCTG AGCACATAGA AAAAATAGCG GGGGATAATA AGTTTGGAGC TCTACAAGCA 180  
 AAGGCAAGGC AAATTTTAGC ACGTCAAAAA AAAGAATCGT GAGGATGTGT TTTCTATAAA 240  
 AATCTGTGTA TTAACGTCAG TGGTGTGTCT GCTGTCTTGA ATTCTTTTTT GACGGTGAAT 300  
 ATGGAAGTAC TTCGTGTAAC CAGTTTAACG AAACATTATG GCTCCAGGCG CCATCCGGTA 360  
 CGTGGGTGTG AAGACGTAAC CTTTTGTGTT GAAAGGGGAC AGGTGTGCGG GATATTGGGG 420  
 TTGAACGGTG CAGGgAAAAG CACTGTACTc GCGTGATTGG TGGGTGATT CATCCGTCTT 480  
 CGGGGGAAGT GTATGCGTGT CATTGTTCTT TATCACGCTA CCCGGTAGGt ATCGGCGTCA 540

TATTGGTGTT CTGCATGAGC AGAATCCGCT ATACGCAGAT ATGACGGTTG AGCAACATAT	600
TCTTTTTGTT GCCCGCATAT TTCAACTTGC CGATGGGGAG GCACGCACCG CTGAAATGAT	660
AGAATTATTC CAGTTGCAGT CTGTTGCACA CAGACGTGTG CGCAATCTTT CTAAAGGATA	720
TAAACAGAGG GTTGGGcTTG CGCAGGCATT GGTACACCGT CCCAAACTCC TTGTCTTAGA	780
TGAGCCTCTT TCTGGTTTGG ATATTGTATA TCTGAAGGAA TTCCATAAAG AGATTGTTGC	840
GCAAAACAAT AATCTTGCTG TGGTGTTC TACGCACGCG GTGCAGGAGA TCGAAGCGTT	900
GTGCGACGTG TTTGTCTTAT TGCATGCAGG ACATGTTCTT TTCTCAGGAA ATAGAGCGCA	960
AATAGCAGCG CGCATCGTGC GAGAATTTCC TGAGAAAAAG CAAACAGTAG CATTCACCT	1020
TGAAACAGGA ACCTTTATCG CTTTGTATT TGAGCAGTAT ATGCAATGGC AGAGTGCACA	1080
GGATGCTGCG TGCTATGCAG TGTAACAAT TTTTACTTT GTATAAAAAG GAGCTGCGTT	1140
CTCTACTCAC TTCACCGTA ACTTACGTGT GTCACGTACT ACTGCACCTT GGTCTGACCA	1200
TACCGTTCAT TGGAGTAAAT TTTGGTTAA ATGCGGGGAT ATCTGAGCTT CAAAGTTTTT	1260
TTCTTAATGC ACCACTTCTT TTCTGCATTA TCATACCGCT GCTGACAATG CATGTATGGT	1320
CTCATGAGCG AAAGTCAGGA ACCGATACAC TGCTTTTTTC TTTCCGATT GCAGAACGAA	1380
CGATTGTTTT GACAAAGTAT CTATCgCTGC TTTCAGTGTA CGGTGGGATG ATTGTTGTCA	1440
GTACTGCTAT CCCTCTTTCT ATTTTTTCTC TGGGATATTT TGATTATGCA CCCTGTGCTC	1500
TTGCATACGT GACGCTTGTT CTTTTTGGTG CAGCTCTTCT TTCGCTGTCT TGTGCGGTAG	1560
CCAGCTACGT TTCTTACGCT GCAGTGGGTT TTGTTTTGAA CTTTACGCTT GCGGTGATGG	1620
CATTGCTGGT GCATATTCCC GCACGAGTGT TCATATCACA CAGATATATA AGGGCATGTG	1680
TTTCGTGGGT TTCTTTCGTA TATCATTTTG AATCTGCCGC TCGTGGCATA TTCGATTAA	1740
GCGATTTTCG GTTCTATATT TTTGTAGCGA TAGCGGGTAT CGAGTTGCAG TGTTTGATTG	1800
TAAGGGTTCG TTTTAGGTGA GCAGAAAACA TCATATACCC TGTACCGTGA TGATTCTGAA	1860
TATAATGATG AGCGTGTGTTG TGACGTTCTG TACACCTGTC CGGTGTGATT TAACAGCACA	1920
GAGAGCATAT TCCCTTTTCG CACACACCAT TAAGCTTTTT GAGAGTGTG AAAGTACTGT	1980
GGAAATAACG TGGTTTTATT CCACCGATGT AGATAGGTAC ATTCTTACCG TCATATATGT	2040
GAGAGATTTG CTTAAAGAGT ACGCTCATCA GCTGAGTAAG CAGTGTGCAG TAGCGATGAA	2100
GGATATTAAT CTCCTTTCTC AGTCTTTGAG GAAAGAACTT GGATTTGTTG CTCGGCGCGT	2160
TACGTATACG CGTAACACTG CCAGCATAGC GTACGATGCG TATTCTGCAA TACTGTGTA	2220
ATATCGTGGT ATGGCTCGTG CCGTACCCTT TGTGTCTGAC ACCAAAAGGC TGGAGTATGA	2280

CATCGCGCGT TTGATCATCC AGATGCAGCA GGAAATGAGT GCAGATATGA TGTCCCGTGG	2340
GATATATGTT CTTGCTCCAC CAGAAAGTTT AAGTACCACA TATGCCCATG TATTACCGCG	2400
TTTGCAATCT GAAGGATtGC TCCCAGAGAT TCTCTCtATT TCTTTGCCTC AGCTAGATAC	2460
CCGTATTCCA CTTTTGaTTT TAGGTtCyGG CTACGTGGaT GAACACGcCG TAACCTTACT	2520
TGATGCTTTT TTGCAGAAGG GAGGAAACGC ATTGTGCTTT GTATCcAGGA AATAGCGTGC	2580
AACTCAATGA TCAATGGACT GTTGAGGAAA AGCGCCATGA TTTTCTTATT AATCTCCTGA	2640
GCACGTACGG AATTACTATT AACTCAGATC TCATTCTCGA CGAGCAAAGT TTTGCTGTAT	2700
CGTTACCTTC AGTTTACGAA ACTCAATACG ATAGAGTGTC TTATCCGTTC TGGCCAGTTG	2760
TTACTTTGAA ACCGTATACG CACGGAGTAC CTGTAATGGT ACAAGCGGGA ATTCAGTTCC	2820
TTCGATTATT TTGGCCCTCG TCAATACGAG TTTCTTTTCC TGCCCGTGTA TTTGAGTCTA	2880
CGAGTAATCA TTCTCTGTGT ATGACTGCGC CTTTTAATAT TGATCCTTCT GTTGATCACC	2940
TGAAAGATCT TGCAAAAGGT AAAATGCCCG CTCCCCAGGC ATTTGTTGCA TTTCGTGATT	3000
ACCCTGGAAA GCTCATGGTA GTGTCCGATG AGTACATGGT CAGTGCAATT GTGGAACATA	3060
CGCACAACGG AGAAAATCTT GATTTTCATGA TAAACTGTAT TCAGTGGCTG TGTGGTAACG	3120
ATGGTTTACT TATGCTGAAA AGCAAGAATC CCGCGTGGCT TCCATTGAAA TCTTTCCGTG	3180
ATGAACAAAA GTTCGCACGC ATTGTGCACC GTGCGCGCTA TCTGAATATC GTAGCTATCC	3240
CTGTGCTTAT AGGAATGCTG TTTGTGGTGA TGCAGATTCT TTATCGGAGA AAACGGTGAG	3300
GGTTATGCGA TCTGTGGATT CGCGTAGCAG CGTAACACGG TGGGTATGTT TAACCTCAGT	3360
GATTTTGTTT TGCTTTTGTA TTGCGGTGAT GAGGTATGGG GGAGTAAAAA AGAGGCGTTA	3420
CTTTTATGGA TTTTGTCTCC ACCCTAGAGA ACGGGCGGAT ATAACGGAAG TCATTCTCCG	3480
TTTTCCAAGG GAGGAA	3496

## (2) INFORMATION FOR SEQ ID NO: 21:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11628 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

GTTAATGTGG AAATGAATTC ATTTCCAAAA TTCTCCGCAG TGACGTATAT GACGTTTCAGG	60
TCTGTTGTCT TGTAATCTC GTGTCCAATA GCCTGCATAA GGTGGGTTTT TCCTAGTCCC	120

ACTCCACCGT AGATAAGTAA CGGATTGTAG GAAGTGCCTG GGTTTTTTGA TACGGAGATA 180  
GCAGCGCTAT GGCTGAATTT GGTTCCTTCT CCGGATACAA AGTTCCTGAA GGTATAGTCT 240  
CTGTTCAAGT CGGGGTGAAA GCTCTTTTTG GAAGGAACCT CTGCAGGAGA GTTTTTCTCC 300  
AGGTAGGTAT GCaCGTGTTC GGGGGGAGCA GTATTTCAT GAGGGGTGCC TTTTTTAACG 360  
GCAAACAAAA GTTTAATGGG GTGTCCAGAA AGTTCGAGGA ACTTGCCTC AAGCTTTTCT 420  
TGATATTTTT GGCTAACTG TATTCGAAA AAGTCTGAAG GTACTGCTAT TTCGATAGCG 480  
TTTTCAAAAG ATGCGATAAA GAACAAATGA GCAAACCACA TGTTAAATTC TGCTTCGGTC 540  
GATTCACCTC GTATCTGGCT GAGTGTCTCG TTCCAGAATA CTTCATACCC TACTGCGTCC 600  
ATCTACCTAT GATACAACCT ATTGTATTTT GCCTGCAATA AACGAAGAGG TTATACGCGC 660  
GTTGCTTTGT GGGTGTAGAT TATCTTGTTA TTCAAGAGAA GTTTTTATGC TACACTAAGC 720  
GGCTCTTGTT TAGTGTGGG CTGTTGCGG ACAGTATACC GTGAGCATGC CCGCGAGAAA 780  
TGGGGAGTCG GAGTGGTTAT GAGGTGTGAT GCTACGCAGG AAAAACGTGC GCACTCAGAA 840  
TCAGGGGAGA GTGTTTTTTT CCAGAAGTTT TTGGAAACGC GGCAAATCTT CCTTTCAGGG 900  
GAAATAAGTA AAGACCTCGC AGAGGGAATA GTACGGCAAC TCTTTGTATT GGAGTCTCTT 960  
TCCGTTTCGA AGCCCATCTA TATGTACGTG GATTCTCCTG GGGGGGATGT GGATGCAGGG 1020  
TACGCTATTT TTGACGTTAT TCGCTTCGTC AAGACGCCAG TGTACACAAT TGGAAATGGG 1080  
TTGGTTGCGA GTGCTGGTGT ACTCGTTTTG CTCGCGGCAA AAAAGGATTG TAGGTTTGGA 1140  
TTGCGCAATA GCCGGTACTT GATACACCAA CCCCTTTCTG GTATGCGTGG CGTTGCGACA 1200  
GACATAGAAA TCCACGCACG GGAGCTTGAG AAAACGCGAT CGAAACTGAA CGCTTTGATC 1260  
GCAAGTGAAA srrGTGTGAG CTTAGATAAA GTTGACAGG ATACAAATCG AGACTACTGG 1320  
CTCGACGCTT CTCAAGCACT AGAATATGGT CTCATTTCTG ACCTGATTGA AAAAAGGGCG 1380  
GACCTTCTTA AGAAATAATG GATACCGAAT CTGTCCTCTT TCGCGCGCAG TGCTTGGTG 1440  
CAGTGGTGA TTTTTTCCTT GAACACCACT ACATAGAGCT CGATACGCCT GCACTCGCCC 1500  
GTGCGCTCGT TCCAGAACGG TGTCTTGAGG TGTTTCAAAC CGAGTACTTT ACGTCagTGC 1560  
ATGCTAAAGA TACACAGAAG TTATATCTCG TTCCCTCTCC TGAGGTTTTT CTGAAACCGC 1620  
TCATCGCGCA ACTGCAACGT TCGGCTTTTC AGATCTCAA GTGCTATCGC AATGGAGAGT 1680  
CCATGGGCGC CTGTCATAGG CCGGAATTTA CTATGGTCGA ATACTACACG GTGTACGCTG 1740  
ACTACAAGAC GTCGCTCGAT GTAAGCAGCA AACTCTTTTC CTTTGTGGTT GAACAAGTAC 1800  
AGAGTCATCC GCTCGCGGAC CCATATTCGT GTGCTTGTTT TTGTGCTCCC TTCGAGTACG 1860

TGACGGTCGA	GGAAGCTTTT	CTCCGCTATG	CAGGCTTTTC	CCTTTCGCAC	GCGAGTAGTG	1920
TACAGACGCT	TGCGCAGGAA	GTATTGCGCT	CCGGAATAGA	CCTGGGAGCA	CGTGCGGGGG	1980
TCGATTATAC	CCAGTGGTCA	TGGGACGATT	TGTACGAACT	GTTGCTCGTG	CATATTGTTG	2040
AACCAAAGTT	GAGGTCAATA	AAGGATCGTT	GCGTCGTGCT	GTATGACTAT	CCTATACAGA	2100
TATCTGCGCT	GGCGCAnGAA	CACACTGGAC	GCTCAGGGAT	ACAATCTACG	TCACCTAACA	2160
AGGGTGACGC	ACCTCACTGG	GTGGTAAAGG	AACGGTGGGA	ACTGTACGTC	CGCGGTGTGG	2220
AACTCATAAA	CTGTTACACA	GAGCAGCGGG	ATGCGAAgCA	TGTTACCCGG	TACTGCAGGG	2280
AAGAACAAC	CGCAAAACAG	GGATCTGCGC	GAGTTGTGCA	TCCTGTTCCA	GAGGGCTTTG	2340
CGCACGCGTG	CgcACGCATG	CCCCCTTGCT	CTGGAGCAGC	ACTCGGATTT	GATCGCCTGG	2400
TTGCGCTGCT	AGCCGGTCGG	CACCTATTAG	ATGCGTTTGT	GTATGATCAG	TGACACTCCT	2460
CCTGCCTTGG	AGAAGTTAAT	TGGAAGTTTC	CTGGTTGTAT	TCGATGAGCG	TTCTCACGGG	2520
AAGATCCCCA	ATCAGCTCAT	GGTACCGTAG	aATGGTAAAC	CCACAACGGC	GAAGAAGCCC	2580
ACCACCTCTG	CCCCGCCAGC	CCGGAGCATC	GTGCGCGCTG	CATTCAGCGT	TCCACCGGTG	2640
GCAATCAGGT	CGTCTGTTAA	CAGCACGCGG	GCCCCGCGA	CTACATCGCT	CTTGTGAACC	2700
TCAACGGTCG	CCTTTCATA	CTCTAAGGAA	TAGGAGCACG	AGTACGTATC	CCCCGGTAGT	2760
TTCCCCGCT	TCCGAATAA	AATAAGAGGT	ATTCCCATGC	GATCTGCAAA	AGGCGCGGCA	2820
AAAATAAAGC	CACGTGATTG	GATTGCTGCG	ACCGCGGTAA	CGTGCTCATC	GCGGTAGAAT	2880
TCCACCATTT	GATCAAGACA	GTAACGAAAT	ACAGCCGCGT	TCATCAGCAC	GCCAGTAATG	2940
TCGTAGTAGA	GAATTCCTTT	TTTAGGGAAA	TCAATCCGCT	TACGAATTGC	GCGGTCCAGC	3000
GCCGCGTGTC	CGTCCACAGG	GGCATGGTAA	CGTCCAATAC	CACGCACGTC	AATGATCTTA	3060
CCGGTTTGTT	GGGAGGCTTG	GTGGATTGAG	AATTACGTCT	CCTGGAAAAA	AGATTTCGCT	3120
GAACTTCAC	GAAATCTCGG	TGAAAATAAA	TGATTATTTT	ACCAATCGGT	GAAAAAAGC	3180
CGGGAAAAGT	CAAAAAGAC	AGTGGTTATG	CTCCATTTCT	TTGATTTTTT	TGTTGGCATG	3240
GTTTTTGCTT	TAAAGTTTGG	AGGAGAAAGA	ACGATGAACA	TGTGTACAGA	TGGAAAAAAA	3300
TACCACAGCA	CGCCACAGG	CGCTGCAGTT	GGAGCCAGCG	CCCCCGGTGT	ACCGGACGCT	3360
CGTGCCATTG	CTGCTATCTG	CGAGCAATTG	CGCCACATGn	TAGCGGATCT	GGGAGTACTG	3420
TATATCAAGC	TACATAACTA	TCACTGGCAC	ATCTACGGCA	TTGAGTTTAA	ACAGGTGCAT	3480
GAGCTCCTTG	AAGAGTATTA	TGTATCAGTT	ACTGAAGCCT	TTGATACGAT	TGCCGAGCGG	3540
TTGTTACAGC	TGGGCGCGCA	GGCTCCTGCG	TCTATGGCTG	AATACCTTGC	GTTGAGTGGA	3600

ATTGCAGAAG AGACGGAGAA AGAGATCACT ATCGTCTCTG CkCTTGCGCG CGTAAAGCGG	3660
GATTTTGAAT ACCTAAGTAC GCGATTGAGC CAAACGCAAG TACTTGACAGC TGAAAGTGGG	3720
GATGCAGTGA CTGACGGCAT TATCACAGAC ATACTGAGGA CGTTGGGAAA GGCCATTTGG	3780
ATGCTTGGTG CTACCCTGAA AGCCTAGGTA GAGCAGGCTG TACGTACAAC ACACGTACGG	3840
CCATGCGCTG GAAGTCCTGT ATTTTGCACA TAAGGCCTCT CTCCCGTTAC AGCATGAGGG	3900
GAGGGAGGTG TTGGTTGAAG TGCTtGGGGA AGTGTGCATA ATCGTCcTAC GGAAGGGGGC	3960
GTTTTGTGGA AAAAATTGTT AACGCAGACG GATCGGATGC TATCTGTCCT GCGTCTGCGG	4020
CCTGTGCTAA GTCCATACGA TCTTACCAGG AGAGCTATTC TCTTGGTGAG GAAATCGCAA	4080
ATGCAGTCAC CCACGGTATC GGTGTCGGAC TATCCAwctT GCACTGGTGC TCCTGGTGGT	4140
GCgTGCAGTG CACTAtACGC CGGCTGACTT GACGGCTCGC TATGTTGTTG GTTTTAGTGT	4200
CTTTGGCTCC TCACTCATTG TGCTGTACCT GTGCTCTACG CTGTACCATG CTCTGCCTCG	4260
TGGAGCGAag TATGTGTTTCG GTGTTATTGA TCACTGTTGT ATTTACGTGC TCATTGCAGG	4320
TACGTATACT GCGAGTTGCC TGA CTACACT GTACGGCGCG ATCGGATGGA CTGTTTTTGG	4380
GGTATTTTGG GGATTAGCGT GTAGTGGGAG CGTAATATAC TCCGTGTTTG GGCATCGGGT	4440
ACGGTGGCTG TCTCTCGTGA TGTATATAGC GATGGGGTGG CTGGTAGTGT TTGTAGCAAA	4500
GCCGTTGCGG GAACGGCTCC CTGAGATTAG CTTTCTGTTT TTGGTATtAG GAGGCGTGCT	4560
CTACACGGTT GGTGTGTAT TCTACGCACT CAAGAGAATA AAGTGGACGC ATACTATCTG	4620
GCATATGTTT GTCATCGGCG GTAGCGTCAT GCATTTTTTT TCGCTGTATT TAAGCTTTTA	4680
AATCCATAAG CCTCCTATGA TAGATAGGAG GTTCGTTTCT TTGCGCAGAC CGCATCCTGT	4740
CTGACGGAGC GaGCGAGTTC GCGCAGTCCT TTATGGTGAT GAAGACTGAA ACTGGTTCAA	4800
CCTCAACGCA TTGCATAACA CCGAGACTGA GCTTAAACTC ATCGCTGCTG CTGCAAGCAT	4860
aGGTGTGAGA CGTAATCCGA AGAAGGGATA TCCGAGTCCT GCTGCTAGAG GAACGCCGAG	4920
CGTGTGTGTA AAAAATGCCC AAAATAAGTT CTGCTTCATG TTCCGCACCG TTGCAATGCT	4980
GAGATCTACC AACGTTACCA CGTCCCGTAT GCAGTTTCTC ATCAGGACTA CGTCTGCACT	5040
TTCTACTGCA ATATCAGAAC CTGCACCGAT GGCGATCCCA ACATCGGCGG ATGCCAGTGC	5100
AGGCGCGTCG TTTACGCCGT CTCTACCAT CGCTACCATC ATTCCGGACG CTTTTAAAGC	5160
GGAAATTTCT CGTTCCTTAT CATGAGGGAG TAACTCCGCT TTACTTTTCT TGACACCACA	5220
GCGTGACGCG ATGGTGTGTG CAACGTGTTT GACGTCTCCC GTTAGCATCA GCGTTTGGAT	5280
CCCACGCTTG TGCAAGGCAC CAATCGCTGC AGAAGAATGT ACCTTTACGG GATCTGAAAC	5340

AAAAAGAACT CCTACGAGAT TTTTATCCGC TGCTACAAAT AAGGGCGTTT CCTCTAGATT	5400
GTGTGATGGA GAGAGATATG TGTCCATGCC ATCAATACTG TGTGCGACCA TCATACGTGC	5460
ATTGCCTACC ATGACGGTCT TTGCATACGA GGTATGCACT AAGCGCGCCC GTAGACCGAG	5520
TCCTTGTTCT GAGTTGAAAT CGGTTATAGC AAGCGGTGTC ATTCTTTTAC GCTGTGCAGC	5580
TACGCTAATT GCAGCTGCAA GCGGATGGCC AGAGCATACT TCTAAGCTGT ACGcAAGGTG	5640
GAGTATGTCT TCTTCGTTAT AGGTTGGATG GAGCGTGTGT ATGTGTGAAA GTGTAGGACG	5700
TCCTAAGGTG AGGGTGCCAG TTTTATCGAA CGCTATTACT TTCGTGCGTG CCATTGCTG	5760
GAATACCTGC GCTGATTTTA TGAGAATACC CATCTGTGCA CCCTTACCCG TTGCAACCAT	5820
GAGCGCGGTA GGGACGGCAA GTCCTAACAC GCACGGGCAT GATATGACCA GGACAGTGAC	5880
TGCGATAGAA AAGGCAAATT CTGCAGACGC TCCTGCGCAT AACCACGCGC ACCAGaGAGC	5940
AAGGAGAGTG CTACGATTGA TGGTACGAAT ATGcGCTGAC AGCGTCGACT AGTTTGGTGA	6000
CCGGAACTTT AGACGCAGCA GTTTTTTCTA CCAATGAGAT AATTTGCGCA AGGGTGGTAT	6060
GCTCCCCTAC CCGTTCAGCA CGAAATTTGA GGAACCCCGT GCTGACTAAG GACGCAGAAA	6120
TGACGGAATC TCCGCGTCCT TTTTCTACCG GaATACTTTC CCCGTGTaCG TTTGACTCAT	6180
CGAGCGTGGC CTGCCCGGAT GTGATGATCC CATCTACCGG AACTAGCTCA CCTGCTTTTA	6240
CAAGTACGGT GTCTCCGACA AGTACGTCTT GTGcAGGAAT TTCTATCTCA ATTTTCATGGG	6300
TCTCATGGGC TGATGcAGCG CTTGCAGTTG TTGGGGAAGA AGGGGATGCT CCGCGCGGAA	6360
CAGATACcTG ACGGATAACG CGAGCCGTTT TAGGTTTTAT GTCTAGCAGT TGTGTGAGTG	6420
CGCGAGAAGT GCGCCCTTTA GACAAGGCGG ACAGGTATTT ACCCACCCTG ACGAGCGTTA	6480
CGATCATTGC AGCTGATTCTG AAATACAAAT CCGCCACATA GTGCGATACA AGTGCCGTGT	6540
CGTTGGCATG CACGCCCATT GCTATACGCG CCGTGGCAAA GAGACCGTAT GTAAAAGAAC	6600
TCAGGGAACC GAGAGAGATG AGCGAATCCA TAGTTGCAGT GTTGCGTCTC AGAATTGCAC	6660
CATACAACGC AATAAGTCCT GCACGAAAAA GAGAGCGATT GCGGTACAGG ACAGGTAATG	6720
TCAGAAACGC CTGTACAAGG GCAAAGGAAA GCGCATATTT CAGGGGGTGC AAGAACCCAG	6780
GGATCGGTAG GTGCACCATG TGCCCCATGG ACAGATACAT AAGGGGCACG AGTAAGCAGA	6840
GAGAAGTACG GACACGCCTT TTGAGCGTCA CAAAATCTGG ATGTACCGGC TGGGTGTCAG	6900
CAAGCGGTGC GgtTGTCGAA TGCCTATCTA AAAGCGTGGC TTTGAATCCT GCATGTGAAA	6960
CTGCATCGAT GATGGTCTGA GCAAACAGGG TGTGCTCAGT AGGGTGAAGA TCAGTGTGTA	7020
CGTATAAATG GCTGGTGGTG GGATTTACGT AAACGTCGTA TGCGCCTGTC ACGTGGCGCA	7080

CTGCTTCCTC	TATGCGCCGC	ACGCACGCAG	nanAgnATAT	ACCGTGAACA	ACAAATGACA	7140
CTTGCA TGAA	AGACTACCTC	CTATTCAGGA	CGGGTTTTTT	ATGTATCCAA	AAGCTCTGGG	7200
GAGGAGCGGC	TGGCAGTGAC	GGCAAGAAAC	TTGCATGTAC	CGGATAAAAA	ACCGTACACT	7260
TTTCATCCTA	TCTGCTGTGA	AATGGGAGCT	CAACGAATTA	TGACCCAAAA	ACTGCAAAAA	7320
ATAGTGCTGC	CTCCTGTCTA	TGGGCCTGCA	GATTTTGAAG	CGCGTGTCTA	CGCATGCTGG	7380
GAGCAGCGGC	AGGCATTTAG	CCCGCGTGCG	CGCGGgAGTG	GAACGTCGGA	TAGCGAGGGG	7440
TGCGATGGGC	ATAGCAGACA	GATAGAAGGG	GGTGCGCGTA	CCTTTGTCAT	TGCTATCCCA	7500
CCGCCAAATA	TAACGGGCGT	ACTCCATATG	GGGCACTGTC	TCAATACGGT	GTTGCAGGAT	7560
ATCGTTATCC	GCTACCAGCG	CATGGCCGGT	GCGTG TACGC	TCTGGATTCC	GGGAACTGAC	7620
CATGCAGGTA	TTGCCACGCA	GCATGTGGTT	GAACGCGCCT	TGAGGAAGGA	AGGCATCCAT	7680
AAGCGTGAGG	TGACGCGCGA	ACAATTCGTT	GCACGAACGC	AGCAGATAAA	GGATTCCCAT	7740
CAAGACACTA	TTCGCATGCA	GTTACGGAAG	ATGGGGGCAT	CTTGTGATTG	GACCTGTGAG	7800
CGCTTTACGC	TTGATGCAGG	TATGTCAGCC	TCCGTACGCG	AAGn tCGTT	ACGCTTTATG	7860
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CGCTGTCTGA	CGATGAGGTT	TTTCATCAAG	AAAAGGATGG	CGCGCTCTAT	TATGTTCCGT	7980
ACCCCTCTTT	ACCCCGTACT	GAAGAAGAAG	GAAACGGCGT	TCCCCCTCCA	TTAGGGACTG	8040
CTCAGGTGGG	GGAACTATC	ATCATTGCTA	CTACGCGCCC	TGAAACCATT	TTGGCAGATG	8100
TGGCAGTTGC	GGTGCA TCCA	GATGATGCGC	GCTACCAATC	TTTGATTGGA	CGTAAGGTAT	8160
GCGTGCCAAT	GGTGAACCGC	ATTGTTCCCTA	TTATTGCTGA	TTCATATGTT	GCGCAGGATT	8220
TTGGAACCGG	TATGGTAAAG	ATTACTCCTG	CGCACGATCC	GAACGACTGG	GATATTGGGA	8280
CGCGCCATTC	GCTTGAAgCG	ATTAATATGC	TCAATCCAGA	TGGCTCGCTC	AATGATCAGG	8340
TGCCTGCTGC	GTATCGGGGG	CTTTCGTGTG	CTCAGGCACG	GATACAAATC	GTTGCCGATT	8400
TGCAGGCGCA	TGGGCTCCTG	TCCCGTGAGG	AGCGCATAGT	GCATTCGGTG	GGAGTGTGTT	8460
ATCGCTGCGA	AGCAGTTATT	GAGCCGTATC	TTTCTCTGCA	GTGGTTTGTC	AAAATGAAAC	8520
CACTTGCTTC	TCAGGCCCTG	GCTGCGTGGA	AGCGTGCGGA	CGTGCA GTTC	CATCCTAAGA	8580
AATGGGAAAA	TACCTATGTG	CGGTGGCTTG	AGCACATTTC	CGACTGGTGT	ATTTCGCGCC	8640
AGCTGTGGTG	GGGACATCGC	ATCCCGGTGT	GGTATTGCGC	ACAGTGTGCA	CAGCAAACGG	8700
TGAGTCGGGT	GGATGTGCAG	CGCTGTGCTC	ATTGCGGCAG	TGCGGATATA	ACGCAGGATC	8760
CTGACGTGTT	AGATACGTGG	TTTCCAGTT	GGCTGTGGCC	TTTTTCTACT	CTTGGGTGGC	8820



CTCAGGAAAC GCAGAArctG CGCGCGTTTT ACCCCACGTC TGCGGTCAAT ACCGCGTATG	8880
ACATTATTTTT CTTTTGGGTG GCGCGCATGA TAATGGCGGG GCTGGAGTTT ACGCAAACGG	8940
TTCTTTTTTCG AGATGTGTAC CTGcACGGTT TAGTGCGTGA CAAGCAGGGA AGAAAGATGA	9000
GCAAATCACT CAACAACGGG GTGGACCCGC TGCACATTAT TCGCACGTAC GGTGCCGAtG	9060
cAtGCGTTTT ACGCTTGCCt TTATGTGTGC gCAGGGGCAG GACGTGTTGA TAGAAATGGA	9120
TTCTGTTCAAG ATGGGTTCGC GGTTCGCGAA TAAGGTGTGG AATGCTTCTC GTTATATTTTT	9180
GGGCAATCTC GAAGGCAGGC GGGGTGACGC TATTGCGCAC GTGTCTCTAA CTGAACTGGA	9240
TCGCTGGATC TTTCACACAT TTAATGAAAC TGTGCAGCAG GTGCGTACAG CACTTGAAGC	9300
GTACCGTTTTT AATGATGCGG CACAGGCAGT GTATGAGTTC TTTTGGAACA GCTTTTGTGA	9360
TTGGTATGTA GAGGCAAGTA AATGCTCGTT TCAGAAACCT GATGAACAGG AGAAGGATCG	9420
CGCAgCTTcA GTGCTCTGTA CCCTTCTGGA AGAGACGCTG CGACTGCTCC ATCCTTTTTTT	9480
GCCGTTTGTA ACAGAAGAGA TTTACCGGTC cTGTCGCCTT CTGTGCACGA TACCACCCAA	9540
GCAATTCCGT CTGGGGCGCA CGCGTTGCTC ATGTGCGCGC CATATCCGGT GTATGTGCCG	9600
TCGCGGGTAG ATGCGCGCGC GTGTGCGCAT ATAGGTGCGG TGCAGGAAAT AGTGCGTGCG	9660
GTGCGnTACT GCGCGCTGCG TGTGGTATTG ATCCGCAAAA AGCTGTTTCA GTCAGAcTGC	9720
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CGGGAGCGGT GCGCGGCACA TATGAGGAAT TGATTTGTGT GTTAGCGGGT ATTTCTCGC	9840
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GTTTGAGCTG TTCTTAGTAA CGACGGAAGG AATTGACCGG ACGATGCTGT GCGCGCTCT	9960
TCAAAAAGCG TGCGAGAAGG CGCGGCAAAA AGTGCAGCAG GTGGAGCGTA AgcTTGCAGA	10020
CGCGCAgTTT TGCACGCACG CTCCTGAAGA AGTGGTGaCC GCAGAGCGCA AGAAACTGGC	10080
AGAGGCGCGC GCAACGTGCC ACACCCTTGC AGGATATCTT GCGGACATGA ATGGAAAGCC	10140
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TGCGGCTATG ATGCCTGCAG GTACTCCTGC GCGGAGCcmA TGATTTCTAC CGTGGGGATG	10560

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 GCGCATACGA CGAACAAATG CACCCGCGCG TGCCGGCGCA TCAAGTGTGT GTCGAGCGCG 10860  
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 GCAAAAGGCC AGGAACCGTA AAAAGGTCGC GTTGCTGGCG TTTTTCATA GTCnGGCCCC 11580  
 CTGACGAGCA TCACAAAAAT CGACGCTCAA GTCAGAGGTG GCGAAACC 11628

## (2) INFORMATION FOR SEQ ID NO: 22:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15518 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

ATCGTGGAGG CAGTGGATAA AATAATTCAG CCAGTTTTTT TGTCTGCACT TACCACCTTC 60  
 GTTGGTTTTG TATCTTTTTG TTTTACCTCT GTTGTGCCTA TTTTGTAGTT CGGCGTGTTT 120  
 GCAAGCGTGG GCGTGGCGTC TGCGTTTGCA TGGCGCTCAT GCTTATCCCC TCGCTCCTCA 180  
 TTATCCGTGG GCCTGAATCG CGTGTGTGTG CGCATGCTCC CGATGCCGGT CATGAACACA 240  
 TGGATACGGC GATCACCGGT ACGCTGATGG TAATCGCCCA TCACTATCGG ACGGTGTTGT 300

TTGTTGCATT CCTTGCTGTT GTATTTTCCC TGGTGGGGAT GTCACGTTTG GTAATTGACA 360  
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AGCAGCacTT CGGTGGTTCT CGATCGCTCA CCGTATTAGT GAGTACCCcT GCGCGGGATG 480  
GCAGTGTAGC ACGTCCGGAT GTACTGAAGG CTATGGATGA TCTGACTGAG TTTTACAAA 540  
CGCGGGTGA GCATGTGGGA AAGGTATTAT CTCTCGTCCC GCTTATCAAG CGCATTAACC 600  
AAGTGTAACA CGCAGACgCG TCGGCGCGAG GCCTGGAGGC GCAGTCTGCA GATGTGGTGC 660  
GCGGTGGTAC GGATGACTTT GGTGTTTTTA AAACATTAC GGGCGGACAT GAGGAACCTG 720  
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TACCGTGTGA TCCTAAGAAA TATGGGGTGA AAACGAGCGA GGAATTGCAG GAAATTATCA 960  
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CCCGTGCGTT AAAGATGAAC ATCCAGCTCG GAACTAAGGG TCAGCAAGAC TCATACGGTG 1080  
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CAGGAGGAGT	TGGGGGACGT	GCTGATGAAT	GTGTGTATGA	TTGCATACAT	GTATGAACAG	11340
CGAGGGGTGT	TCTCGCTTGC	AGATGTTGTA	ACTGCATTAA	CGGAAAAGTT	AATTCGACGT	11400
CACCCCCACG	TATTTGGGCA	AACAGAAAGGA	TTTCTTGAC	CGGAAAATCC	GAAGCGAGCA	11460
CAAACAGCAC	AGGAGGTGTT	TGATCAGTGG	GAACGGATTA	AAACACAGGT	GGAGCGTCGC	11520
CGTGACGCTT	CTCCGTTAGA	GGGcATTCTT	CGAACGGTTC	CTCCCCTCAT	GcGCGCGTCC	11580
AAAATGCAAA	AAAACGCGTC	GCTGnCGCGT	CTTTTTTGTC	CAACACGCAC	GGAGGTGGTA	11640
CGAGAATGTG	CGCGTACCTT	TCGTGCACTC	CGTGCGATGT	CAGAGAAATC	TGCCGAACAA	11700
TCCGCCACTc	AAGCAGCGCA	TGTTCAGTA	GGTGCGCTGT	TGACTGCAGT	GATATCGTTT	11760
GCACATCTTG	TGGGGGTAGA	TCCGGTGCTC	GCCCTTATCC	GCGCAAATGC	GGACTTCGTG	11820
CGCCGCTTTT	CGTGTGCCTG	TTCTAtACCT	GcCATTTCTG	GAGGTACTTC	TGTATTTTTG	11880
TCTCGCGCGT	GCCATAAACC	ACGTGCGCGA	CGCACGCGGG	CGTCTGCGGT	GCGCAGGCGC	11940
GCACGGTcAC	GGcGACTGTT	TTTTACTCGA	CACAAGCTGG	GGAATATGCT	ACGGTAGGAC	12000
GCGTCCCTGT	CTCCGTGTGT	AAATTGTTAG	CACGGGCAGG	GTGCGTGTTG	AAGAAGAGGG	12060
GGCTTATGAA	GACGTTGCAG	TGTGATATTT	GTCGGAAGGA	AGTGGACAAT	TCGCTGCCCCG	12120
AGAGGTTGTA	TTGGACATTC	CGGGAGTATG	ATGTGTGTGA	GGACTGTAAG	GAGTCTATTG	12180
AGGACAAGTT	GCGCCCTATC	ATACGTACTC	ACCAGCCTTA	TTCTCAGGGT	TGGTACGAGA	12240
ATCAGTTCAT	GGGTATGGTG	CAGCGCGGGG	TGTCTAACCG	TCGTCCGTAA	GTTTTTGATG	12300
TCAGTGTTC	GTGCTTGATG	TGTGArGTAG	GGACGTAnGG	GTGTGATCCT	TTTTTCTCGC	12360
GCGAGGTTGT	GGGCGAGGGA	TGGTGTGCT	CGCGCTTATG	TTTCTTTCCT	TGGGCCkCGG	12420
CGCTGTGTTT	TTTGTGCGTC	CCgGTGTAcT	GGGAcGGTTC	CTCTGTGCTG	TTCGTGTGTG	12480

cAGGATCGGT	TGTACGCGCG	CGCACATGAC	TTTTTGGAAc	ACCCTGAGGA	TTTCTGTAGT	12540
CGCTGTGCCA	AGCCGCTTGT	TTCGGCGCGA	GCGTTGTGCG	TCTCTTGCCG	TGCGCTTCGA	12600
GAATCGGGTG	AAACGCCTGC	GCTTTGGCGT	GTCTTTTCAC	TTTtGCCgTA	CCTGGGTGTG	12660
GGGCGTCCTC	TTATGTCGTT	GTGGAAGACA	CAGCAGGAGC	GGAATTTTGA	TGCTCTTTTT	12720
TCCCGCATTG	CCGGGTGTTT	TTTGCCTACA	GCGCGTGAc	GCTccTTCGT	CACTGCAAGT	12780
ACCGAGTTGG	TGCCAGTGCC	GCCgCGGCCA	TGCAAGATGG	CTGAGAGAGG	ATGGGACCAG	12840
GTTGAGGACG	TGTCGCGTCG	ACTAGAATTG	GCTGGTTTTA	CCGTTAATCG	TGCGTTGGTG	12900
CGAGTAGAGG	GTCGTTTCGC	GCAGAAAACA	TTGTGCGCGG	CTGCGCTGnT	TGAGAATCTT	12960
GCAGGGAGTA	TAGAGCTCGG	GGCGCACGCT	CGTGTGCCGC	GTGATGCCTT	GATTATCGAT	13020
GACGTATTAC	CACGTATGCC	ACGATGGACG	CGTGTGCGCT	GTGCTGCGCT	CCTCGGGCAG	13080
CGAGCGTGTG	CAGGGTTTCT	CGTTCTTTTT	TGCGTGAGGC	GTCAATTAGT	TAGCGAACTT	13140
CTTTTAGAAA	TTCCTGAAAA	TGCCGCAGgA	CGTACGGCCC	AGCAATTTTT	CTCTTATATG	13200
TTGTTTTTGC	AGCATAGGTC	TCTTAGGCAG	CACTCCGTgC	ACCGTGGTCT	TCGTGCGGTG	13260
CAGGTGTAGC	GTCCGTGGAG	TAAATCCAG	TGATGTGCAT	GCATGCGAAA	CTCACGCGGG	13320
GTGACCACAA	GCAAGTCGCG	TTCAACCGCG	CGTGGGGTTC	TTCCAGAGGA	AAGCCCGATG	13380
CGTGCGCTG	TCCGCAGATA	TGCGTATCAA	CTGCGATTGT	GGGTATGCCA	AAACCCATGT	13440
TCAGGACTAC	GTTTGCCGTC	TTGTGACCGA	CCCCGGGTAG	ACTCTCTAGG	GCATGGGCGT	13500
CGCACGGTAC	TTGGGCAGCG	AAGCnTCGAT	GAGTTCAGCA	CTGAGTGCAA	TGATTCGGCG	13560
TGCTTTCGTG	GGGTATAAAT	TAATCGTCCG	TATGTAGGAG	CATAGCCGTT	CTTCCCCCAG	13620
CGCGAGCATT	GCTTGGGGGG	TGTCTGCCAC	ATCAAACAGA	GCAGCGGTCT	CCTTGTGTGAC	13680
GCTTTTGTCT	GTTGCCTGCG	CAGAAAGCAG	TACTGCCACC	AGGAGCGTAA	AAGTATTGCG	13740
CCAGTGAAGT	TCTCCTTGTT	GTTGCGGGTT	TGCTGCGTGC	AgcTGCTCAA	AAACGGCGTG	13800
TACCCCTTG	CTGTCTAATA	GACGCATAAG	GGTGCCAGTA	AAGAGAGGTA	GTTTAAAAAG	13860
TGCAAGAGGT	CATGGGGTGG	AAAGGAGGGA	AATGAACGCA	CAGGATTCAG	AGAGTTTCCT	13920
GAAGTACGAA	CTGCTGGACG	CACTCAAGCA	TATGCACCTC	GTGGTTCAGT	TTTCGGATAT	13980
TAAGCTTTTG	CGGTACACTG	ATAAGCAAGA	CGAGCTTAGG	AAAGCTTGTC	TCCGACTTGG	14040
AATGTTGAAA	ATTGGTTGAA	ATGACGATGA	TGGAATGCTT	GCGAAGAAGT	TCCATAACCT	14100
CGTTGACTTC	AGGTTTCATGA	TGGGAGAACT	GTATTTCTAG	GCGCTTATTC	TGGCGAGTGG	14160
GAAATACACA	CTTTTCAATT	TTATCCAAGC	CTGCAAGGGT	GATCAGTACG	AGGAGCACGA	14220

GCATCGCCCC TGCGCTGTAC AGCctGCGCC GATAACGAGA CCGATCCCTG CTGTCACCCA 14280  
AATAGTAGTA GCAGTGGTTA AGCCTTTTCAC GTTTGCACCC ATTTTAAAGA TGGCACCGCC 14340  
GCCGAGAAAT CCCATGCCGG AAACCACCTG TGCAGCGATG CGCCCGGGGT CGCCGATGTG 14400  
GTCTCCGGTA ATCTCACTTA CGCAGAGGGA CAGGAGCATA ACGCCCGTAG CACCGACACA 14460  
GATGAGTGTG TGAGTGCGCA ATCCCGCTGC CTGTAACTTT GAGGAGCGCT CCAACCCGAT 14520  
AGCAAGTCCT GaGACAAAGC TGaGCAAGAG CCGGaCAACA ATAACGGaAT CTGTAATCAT 14580  
GACTTTTCTC TTAGGGcGTA gcAGGaTGCA AGTGCCTCGA GGGAGACTTG AACTCCCACG 14640  
CCGGTGAAGG CACTAGCACC TGAAGCTAGC GTGTCTGCCA ATTCCACCAT CGAGGCAAGA 14700  
AAACCCTTCC ATGGTGGGAA ATATAGTTTT TCTAGTCAAG GGATTAGAGC AGCTTTCAGG 14760  
GCACGGGATG CAAAGGCGGC GTACTTGACA AAATGCCAAT TCCAATACAC GCTGcCCGcG 14820  
GCgCTGCGCg TGGCGCCGTG GGCTATTAGC TCAGCTGGTA GAGCAACGCC CTTTAAAGGC 14880  
GTGGGTTCGAT GGTTCGAATC CATCATGGCT CAGAGGTGGG ATTGGTGCGC AACAAGGTGC 14940  
GAGTTCTTGC GGTGGTCGCA GCGCTTGCGG CTGCGTGCGC GGTGGGCTTC TTTCTAGGAA 15000  
GGTGGTTCGA CTTCTCTGCT AGGTCCCTCGG TGCTCGAAGC AGCTGATTCC CTCTCCGTTT 15060  
CTTCTTCGGA AGCGGCCAGC TTTTCCACGG TTGTTGCAGA GGGGGACCCG TACACCGTCG 15120  
ACGAGCGGCA GAACATCGCC GTTTACCGCA GTGCCAACGA GGCCGTTGTC AACATTACCA 15180  
CTGAGATGGT AGGGGTAAAT TGGTTCCTAG AGCCCGTGCC TCTCGAAGGT GGCTCTGGGT 15240  
CTGGCGCTAT CATTGACGCC CGCGGGTACG TGCTCACCAA TACGCACGTC ATCGAGGGTG 15300  
CGTCTAAAT TTATCTCTCG CTACACGACG GCAGCCAGTA CAAGGCAACT GTCGTGGGTG 15360  
TAGACAGGGA GAATGATCTT GCGGTGCTTA AGTTTGTTTC TCCTCCTGGA GCACGCTTGA 15420  
CAGTTATCCG CTTGCGTTCT TCGCGCAACT TGGATGTCGG ACAAAGGTG CTTGCCATCG 15480  
GGAATCCCTT TGGACTAGCG CGTACTCTTG ACCGTCGG 15518

## (2) INFORMATION FOR SEQ ID NO: 23:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6234 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

TTTGGAATTT TGTGTTGTGCG TTCACGGTAA ATAATTTGTA GCGTTCCGTG CCCGTTTTGA 60

AACGGTCCGG GGCTGCGTCC ACCAGGCAAG GAGTGTATATG AAAGCGACGC TTACCTTTGT	120
CTTTATGCTC CTTACGTCGC TGCTGCAGGG TCAGTCGCAA CACATCACGC GCTTTGCCGT	180
CATAGATGCG GCCCGCATTT ACTCAACCTT TTGGCGCGAT TCGCCGTTCC TGCGCrATLA	240
TGAATCTAAA AAAGCACGGC ACCAGGGTGA AATTCAGAAA ATGTCTGATG AGCTCGTAGA	300
nTCCGGGCAA AAAAAAGTTG ACGCGCAGAT GCAGCAAAAC ATCGCGTCAG TCCAAAAGTA	360
CGAGGTGCTC ATTGCGTCAA AAACCGCGCT CCTGTTGGAG TATTCTAAAA CGTCCAACGA	420
CGAGCTCACC GCGCTGCGCA AAACGCTCAT CGCAGATGAC GCATTCTATG CAAAACCTTA	480
CGCCGCTATT AGGCGAATTG CAGAAAGTGA AGGCTACAGC ATCGTCTTAG ATCTGCAAAA	540
AAACGCCGGA ATACTCTGGT ACAGCCACTC GGTGATATT ACCGAAGACG TCCTGCGGGA	600
GCTGAGCAGC TCGTGATGCA CCGTGAGCAC CGCGTCTcCT GCCTCCTACG TGTTGGcCCA	660
GGAGCGTCCA CGTGAGGTCC CTCGCGTCAG ATACCCCTCT CATGCGTCAG TACCACGCCA	720
TTCGGGCACA GCATCCGGAT GCGGTCTGT TCTTTTCGCTT GGGCGATTTC TACGAAATGT	780
TCGATTCCGA CGCGCTCCAC GTGAGTACCC TCTTGGGGCT CACCCTTACA AAACGAAATG	840
GAACACCCAT GTGCGGGGTG CCCGTCCATA CCGCGCGCAC GCACATAGCA CGCCTGCTTA	900
AGCACGGTAA AAAAGTTGCC TTGTGCGAGC AGGTTTCTCA TCCTGTCCCC GGAGAACTCA	960
CACAGCGCAA GGTAATTGAG ATTATCTCCC CCGGGACCGC AGTGGAAGAT GACTTTCTCA	1020
GTCAGGGATT TTCCAATAC TTAGCCACCG TCTGTGCCTC AGACGCCACC GTCGCCTTTT	1080
CTTACCTAGA AGTCAGCACC GCGCCTTCT TCATCACCAG CTTTCCCCGC GCCGAAGCAG	1140
CGGACGCATT GCAAAAAGAG TTCGGACGTG TCCAGCCGTC TGAGGTTCTC CTGTCTGCTT	1200
CAGTGCTCCG TTCACTGCCT GAACTTGCCG CTATCCTCAG TCTCTACCCC CGGCTCGTTC	1260
GTACCACCGG CGCAGATGCG CTTTTTAATC CCGAGCACAC TAAAAACCGC CTGCACCATT	1320
GCTTTCGCAC ACGCAACTTG GATTGCCTCA CCCTCCTGCC CCATTGCGCA GACCTCGCTG	1380
CCGCCGGGGC GCTGATTGCG TATTTGGAAG AAACCACGCG ACACCCGCTC TCCCACGTCA	1440
GTGCCATCAC CCGCTACCAT ATCCATGACT TTGTAGAAAT CGAnTGaCgc TACGCGCAAA	1500
AATCTAGAGA TACTTCAAAA TCTCCACGAC AGCACCCATG CGCATTCTCT TTTTGAAACA	1560
CTCAACTATA CACACACCGC CATGGGTACC AGGCTCCTGC GCTATTGGCT GCACCACCCC	1620
TTGCGCTCCC AGGAGGAAAT TCAAAAACGC CTCAGTGCA TGGTCTTTTT TCATCACCGT	1680
CCCCACATCC TCAAGAcTG CGTGCAACAC TCTCGTGTGT TCGGGATGTG GAGCGCCTAG	1740
TCGcCCGCT GGCCTTAGAA AAGGCGCACG GACGTGACTT GCTCGCCTTA AAAGAAAGTC	1800

TCAGGGCAAT CCTTACCTTC CGCAGCCTCG AGCGCGAAAG TCCCTTTCCC CCAGACCTTC	1860
TTCCCTCAGA AGGGGATACC CCGGTGCTGC AGGAACTGTA TGGTCTTTTA GAACAGTCTA	1920
TCAAAGAAGA TTGCCCCGTA ACGCTAAGCG ATGGGAACCT TATCAAGCGT GGTTTTTCTG	1980
CGTCCTTAGA TGAAGTGCAC CGCGTGCGTG ACAATGCAAA TGAAATTCTA AAACAATATT	2040
TGGCAGAGGA GCGTGAGCGC ACGGGTATCG GTACATTAAA AATGAAGTAC AATCGCATGC	2100
TCGGTCACTT TCTGGAGGTA TCCAAAGGGC ATCTTTCTGC TGTCCCTGCG CACTTTATTC	2160
GTCCCGTTC ACTGAGCAAT GCCGATCGCT TTACCACCGA ACAGTTGTCA GAATTGGAAG	2220
CAAAACTTGC CCGCGCCCGT GAGgGCcTCG TTTCCTTTGA ACAAGAACTC TTTGCAGATA	2280
TCCGCCGTAC CGTATGTTCT CATACCCAGC TGCTGCGCAC GAACGCTGCA CGGGTGGCAC	2340
AGCTGGATGT GCTCCAATCT TTTGCGCACG CTGCGyTCCA GCATGGCTGG AGTCAACCGG	2400
TCTTTATCAA AGACGGTGCA CTTCGTATTA CGGGGGGCAG ACATCCGGTG GTGGAAC TTC	2460
ATCTCCCCTC CGGGGAGTTT GTACCCAATG ATCTGACACT TTCTTCAAGT GAACATGCGG	2520
TGTTGCCGCG CTTTGgsTCA TCACCGGACC GAATATGGCA GGAAAAAGTA CTTTTTTGCG	2580
TCAGAcTGCG CTCATTTGCC TGATTGCGCA GGTGGCTCC TTTGTCCCTG CAGAAAAGGC	2640
AGAGCTCACC CCCGTCGATC GTATTTTTTG TCGGGTAGGA GCGGCCGATA ACCTTGCGCG	2700
CGGGGAaTCT ACCTTCTTGG TAGAAATGAG TGAAACAGCA CACATCCTGC GTGCAGCAAC	2760
CCGCGACAGC CTTGTTATCA TGGACGAAGT AGGACGGGGA ACGGCAACTG AAGACGGTTT	2820
ATCCATAGCG CAGGCAGTCA GTGAATATTT GTTGCAATCAT GTGCGTGCAA AAACGCTGTT	2880
TGCAACACAT TACCATGAAC TGTCCCGTCT TGCCCACCCG CAGTTAGAAC ACCTCAAGCT	2940
TGATGTTCTA GAAACTGACA ATACCATTGT ATTTCTGAAA AAAGTGACGC CCGGTTCTTG	3000
CGGCAGTTCTG TACGGCATT TACGTTGCGCG TCTGGCGGGG CTCCCTGAAT CGGTACTGGC	3060
ACGCGCGTGT GAGCTTTTGA AACAACTGCA GCAGCGGGCA GGATCTGCTC CACGTGCGTn	3120
CTnTGCGCAC GAAGCAGATG CAGTGGCTCA AACAGAAGCA GTACACGCGC ACAAGGCAGC	3180
GTCTAAACCG TGCGCGCagc GTGTGTCGGC AGATCTATTT ACTCAAGAAG AGTTAATAGG	3240
CGCAGAGATT GCaTCGTTGA ATCCaGACGC CATTACACCG CTTGAAGCGC TGACACTCAT	3300
CGCGCGGTGG AAACGCAGCC TCCGCGGTTC TGCAACGCAG CAGAGCAGCG CCATGACAAA	3360
ACGGAAGGGG TAATGGTATG TTCCCCTGTT ACGCACGACG GGTATCGGGC ATGCGGCGCG	3420
CGGCGTTTTG TCCATTCTTT GCGCTAGAAA CAGAGCGAAC AATATTCTGC CTACCTGAGG	3480
AGAGAAAAAC GTGAATAAtT gCACTCCGTG cGTaCCTGAG TACGCGTGCT CCTGACCAGA	3540

TACATAGTGC	TTTTGTTGCG	TATTTGGCCA	ATCTTGATTT	AGTTGCGCAC	CAGTTTCCGC	3600
AGATTGCTTC	TGATATTGTG	CAGGAGCTGA	TAGATCAGCG	GTCGTATGTA	AAGTTAATCG	3660
CAAGTGAGAA	TTACAGCTCT	CTTGCGGTGC	AAGCGGCGAT	GGCTAACTTG	TTGACTGATA	3720
AATACGCAGA	AGGGTTCCCC	CATCATCGCT	ACTATGGCGG	GTGTCAGAAT	GTTGATTCTA	3780
TTGAGTCTGC	CGCCGCTGCA	GAAGCATGCG	CGCTCTTTGG	TGCTGAGCAC	GCATATGTCC	3840
AGCCGCACTC	CGGTGCAGAT	GCGAATCTTG	TTGCATTCTG	GGCTATCCTT	TCGCGGCAAA	3900
TTGAAATGCC	AACCCTTTCT	TCTCTTGGTG	TCACCGCCgC	TACGCATCTG	AGTGAGGAAC	3960
AGTGGGAAGT	ACTGCGCCAG	AAAATGGGTA	ATCAAAAAC	TATGGGGTTA	GATTATTTTT	4020
CAGGCGGTCA	CCTGACCCAC	GGGTACCGCC	AAAATGTTTC	AGGACGAATG	TTTCGTGTGG	4080
TGTCCTACGC	GGTGGACCGA	GACACAGGAC	TGCTCGATTA	CGCTGCAATC	GAGGCACAGG	4140
CAAAGCGGGA	AAGACCACTT	ATTTTACTTG	CCGGATACAG	CGCGTATCCT	CGTTCCATTA	4200
ATTTCCGCAT	CTTTCGGGAA	ATTGCAGACA	AAGTGGGCGC	AGTACTCATG	GCTGATATGG	4260
CTCACTTTGC	TGGACTGGTT	GCAGGCGGTG	TTTTTACGGG	AGACGAGGAT	CCAGTGCGCT	4320
GGTCTCATAT	CGTGACCAGT	ACCACACACA	AAACGTTGCG	CGGGCCACGC	GGTGCCTTTA	4380
TTTTGTGTAA	AAAAGAATTT	GCAGAGGCGG	TGGATAAGGG	CTGTCCGCTT	GTGCTCGGCG	4440
GCCCGCTGCC	ACATGTGATG	GCAGCAAAGG	CGGTTGCGTT	TCGTGAAGCT	CGAAATGCTG	4500
CTTTTAAAC	CTATGCGCAC	GCAGTCCGTG	ATAATGCGCG	TGCGCTGGCA	GATGCCTGCA	4560
TACAACAGGG	GATGCAGCTG	CAGACAGGGG	GGACGGATAA	CCATCTGCTA	TTGCTtGACG	4620
TGCGTCCGTT	TGGACTGACA	GgTCGTCAGG	CAGAgCGCGC	GCTGATAGAC	TGCGGAGTGA	4680
CGCTCAACCG	TAACTCGCTC	CCCTTTGACC	CAAACGGCGC	ATGGCTCACC	AGCGGACTGC	4740
GCATCGGAAC	CCCCGCGGTA	ACGAGCCTTG	GAATGGGGCC	TGAGGAAATG	AAAAGAATAG	4800
CGCGCCTGAT	CGCGCGCGTG	CTCGGCGCTG	CAACGCCTGT	GCGGACAAAG	ACAGGTGCGC	4860
TAAGCAAATC	GGCGGCCGAG	GTGCCCCGCG	AGGTTAGAAG	CTCAGTCTGC	TCGGAAGTGC	4920
GGGAGCTGCT	CGCACGCTTC	ACGTGTGTACC	CTGAACTCGA	CGAACCCTTC	TTGCGCGCAC	4980
ACTTTACGCG	TCGCCCTGCh	GGACAAAACA	CCTGCCGACG	AAGGgACTTG	AACCCTTaCG	5040
GGGTTACCCC	AACAGATTTT	GAGTCTGTCTG	TGTCTGCCAG	TTTCACCACG	TCGGCCCCGCG	5100
CGCAgCCTAT	CACACGAGGA	ACAAAAGgTA	CAGTGTTC	TGTAGTCTTC	TTGCGTGAGG	5160
CCCCGTGTCT	CCCATGTAGG	GAGCCGTTAT	TTTTCTCCCA	TGAGGAGTTT	TAGTTCCTCGA	5220
ATATCTGCCA	CCAGTTTAGA	GCGATCTAAA	TGCTGATAAC	GCGCAGGGAG	CATTTCTTTT	5280

CCTGTGCATT CGAGTACTGC CACTAAATTT TGCAGTTCAA TTTCGTGCGG ATAAGCAGGA 5340  
 GGGATAAAGT CTTCAATGGT GCGGGTGATG TCCTGTGTGG TTACCATCGT GCGATTTTCC 5400  
 ATCGCAGCAG TTAGCTGGGC GCGTACTAAA ATGGCTTCTA AGTCCGAACC GGAAACAGCG 5460  
 AATTTTATTC TGCGAATGAT TGCCGGTACG TGTACATCTT TGAGCTTGAT ACGTAATTTT 5520  
 TTTTGTAGTG CTTCAAAAAT TTCCGTTTTT TCTTTTGTGG TTTCAGGGTA GAAGAGCGCA 5580  
 AGATGCTCTT CTGCGCGTCC CTGTCGTTTC AGATCTATTG GTAGCAAGTC TGGGCGCGAA 5640  
 GTAATCAGGA ACCAAATAAT ATTGCCCCGG TGTGGGTGT TACCCATAAA CCCTGCAATT 5700  
 TGTGCAAAAA TACGCGATTC ACCTGCCGGC GCGTTACGCC TACCAAACAC CGCATCAGCT 5760  
 TCGTCCACCA TCACCCTAC CGGGTAAGC GCTTTGAGGA TGTGAGCGT TTTTCTAGG 5820  
 TTCGACTGTG TAATGCCAGG CTGCGTTGCC TGGAAATTAC ACAAACGCAC CATGGGAATC 5880  
 CCAATTTCCC CCGCAAATGC GGAAACCATA AATGATTTGC CTGTCCCAAT CGGCCCTGAG 5940  
 ATAAGGTATC CCATTGGCAA CACATCTGCT CTTCTTGCT TAATGGCGCG CACTGcGTTA 6000  
 TACAATCTCT TTTTACAAA GACATTTCTT GcAACGTATG AAAGGTCGCA GGATGTGTCTG 6060  
 ACAAATTCCA ACAAACCGCC TGCTTCGTGC TCAATAATTT CCTGTTTCTT CCTTTTAGAA 6120  
 ATGTAAGGTT GCAGAGTCCG TATGGGAAAG TCTACTGATA WTGwcCTctG GCTcCCATTG 6180  
 CATCGATCGT TGGnACGTCT CTGCCGAAG CTGGTGGAGG GTCACTAAAT TCAA 6234

## (2) INFORMATION FOR SEQ ID NO: 24:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1548 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

CGGATAAAGG ACGACTGGGC TGGCAGCGGG TGTGGGTTCC CACCTCCTGT TCGTGTCTTT 60  
 TCAGGGTGTG TGC GCGTTCC GAGAAGAGGG CGTTTGTGT GTGGGAGGA GTACGATGGA 120  
 TACGCATATA TGAGGCGCCG GGTGTGCACG GTGGTGC GCGTGGTGTG TCTACTCAGC 180  
 ACGAGTTTGC TGACCACGTG CGATTTCACT GGCATCTTTG CGGCAATTCA GTCGGAAGTG 240  
 CCCATTAAAA CGCCGTCCAT CCCGGGGGCG ATTTATGGCC TGGTCAAGGC CGGGAGCAAG 300  
 CTCTACGCCA CCAACGGCCG GCTTTGGGAA AAGGAGCTGA ACGGCACTGG GTCgTGGCAG 360  
 AAAnTGCTTT CCTCGTCCGT TCCCACTGAC TCGGATAAAA AgGTTATGAR CaTTGCCACC 420

GACGGGgACA CGTTCGTCTT CGCCTGCGTG CCTGGCACGG GCGTTTACAA AACTGCGTA	480
AATGGCGCGG GCAGCTCAAG CACCGGCACA ACGGCAAGCC CCTCGACTGA AACCTGCTCG	540
CAGCATGCGA CGCTCGTGGG GGGAACTGCC AAGCCCTTCT GGCTCGTGCC GGGAGGCgnG	600
nGAAATAATG GGAAGTGGG TTGCGGGGGA GGGGGGGTG GCTCCTCCTC GAGTAGCAGC	660
TCGTGCATTC ACATCTGGCT CGTGCCGGGA GGCnGnGnGa AATAATGGGA ACTGCGGTTG	720
CgGGGGAGGG GGGGGTGGCT CCTCCTCGAG TAGCAGCTCG TGCATTACA TTAAGGTAGA	780
AAACACGGAC GAACAGTTTC TCGATATGGG TGAGGGGTAC GTGGTGACCA CCAAGCACCT	840
CTACACCAA AACGGCTCGT CCAGCGCGGG ACCGGCGCAG TGTCCCGGTG GCGGTGGCGG	900
CGGAGGCAGC AGCGGGGGTG GGGGTTCTTC GGAGTACACC AAAGCTTCCT GTTCTTTTC	960
CACGCCCATT CTGGCAAGCG TCACAACGGG TGCTATCACT ACATTCTCAC CAAAGAAAAA	1020
GTGTACTGCA GAAAGCAGGA CACCGCTTCC TCCGCTGCGT CGTCACCAGC CCAGTGTCCT	1080
TCTTCCCCTT CTCTCTCTTC CTCTCTCTCG ACGAATGCGG GATGCGAGGT GCGGCACGGG	1140
GTGGACGACC CGCTGTGTCT TCGGATTTTT AAACACAACG GCTGCGAATA CTTGCTCATC	1200
GGCGGCAGTC GGGGCTACGG GGAAATAAAG CTGGAAGCGA ACTCCAGCGG TACGAACGGC	1260
ACCTGCATGC GATTGAAAGA GAGCAATGTG CACAAGAGTC CGGGCCAGTG GGGCGAGTCG	1320
AGCCCCACGC CCAAAGCGAG CGCCGAGCAG TATCGGGGCA CGGTCGGTCG GTTTGCCGTG	1380
CAGAAAATCT ACGTAgtTGA AAAAAATGGC GGTGGGAACG GTGTCGCCGC GGGTGGGGCG	1440
GGCTGTCTTG CAAACGCCAG CAGTTCCAGC GGAGGGACCA GCAGCACGCA GCGTCCAGAC	1500
CTCTACGCCG CAGTGGGGGA GTCGAGCGAC ACCTAnCAG GGGGGTTT	1548

## (2) INFORMATION FOR SEQ ID NO: 25:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3172 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

TACGAAGAAT CGTACTGCCC ATCCCCATCC CgATCAAAAT TCCCGTCAAC ATTGTTGATA	60
AAGTACTGTT CCTTAAAAAA ATCGAGTCCT GTCTTTCCAT TCAGCCCCAT TGCCTTACGG	120
TGTACGTTAT TTACCAGATC TACAAAGTTC ATAGCCATAG TATCGAGCTT GCGCAsTTCA	180
TCGCGCACGT CTGTGTCACG CATCTATCA ACGCTGCAAG CTTACCCCCA GAAAAGTGCG	240



CACGATCCCC	TGAGTCCTTC	CACACCACGG	ACACATATCC	TTCAGGCGTT	GTTCCACTGA	300
CAAGCCCAAG	TGTCTTATAA	CTCTTCCCCT	GcACAACCTC	TAATCCCGCA	CTGTGAATAA	360
CGTAGGACTC	ATCCTCATCA	CGCACGTCCA	CCCTGACCTC	AATGCGGTGC	GCGAGACTTT	420
CCACCAACGT	ATCACGTCGA	TCTAAAAGAT	CATTAGGATT	ATCACCCATC	GCTTTTGA	480
TCACAATCTG	TTCATTTAAT	TGAGCAATTT	TGGCAAGGAG	ATCATTCACC	TGCTCAACCG	540
TTGCCTCAAT	ATCCGCGTTG	AGCATATCGC	GAATACCGAC	AAGACCTCTA	TACTGATGAT	600
GAATGGCATC	CGTTAGCGTC	TGTGCACGCG	TGAGCACAAC	CTGACGCGCT	GCACGGGCTT	660
CAGGATACAC	AGACAGTTCC	TGCCAGCCAT	CCCAAACTG	GTCCAGCCTG	GTACGAACTG	720
CAATATCCTC	CGGCTCATT	TACACCTGCT	CTAAAAGACG	CACATACGCA	TCACGCGTGC	780
TCCAATAmCC	CTGTTCTGCT	GTCTGAGACA	CAATGCGACT	ATCGAGGAGC	TGGTCAcGCA	840
AACGCGCGAT	AGAACCGATG	GTGAcCCCTT	GTCTATCTG	ACCAGGCAGC	TGAGCGCGAG	900
AAAGATCAGG	ACGGTACAGC	GGCTCGAACG	AATCGAGGTT	TACTCGCTGG	CGGCTATACC	960
CCGGCGTGGA	AGAAaTTCGAC	ACGTTGTGTC	CTGCAGTCTG	TACAGATTGC	TTATGCGCGT	1020
AAAGAGCAGC	CTTTCCAAGT	TCTATAGATG	CAAATGTCTG	CATGTGTTCT	CCCTATAAGA	1080
ATGGAGGGTA	CGCGCagCAG	CCCCATCAGG	AACCTCCCTC	TCGCCCTGTG	GATACTCGCG	1140
CTCTGCTCCT	CCCCCGAGGT	ACCGCACCTT	ACAGCACACG	ATCAAAGACA	AGACTTCCAG	1200
GCGCACAACG	GACTGGACAT	CCGTCTTCG	TATAGGAGCT	GCCCTGCTGT	TCACACGTAA	1260
GGGCGCTGAC	AAGCGcGTGT	GCCAGACCAC	GCGCGTGAGT	CAGATAGTGT	TGGATTGCAT	1320
CGTGCTCATT	TTTTGAAGAG	GCAACTTTgc	tACGCAGCGT	CCTATAGAGA	GCGACGACCG	1380
CATCGTGAC	ATTGACATCC	GCGCGCTCA	AATAGGCAAA	GAAGGAATCA	AAGTCAACCG	1440
GCGCGTCACC	GTACGGCCGA	ACCTCTTGGA	GAAgTAAGAA	ACACCGTTTA	TCGAGATGCA	1500
AGAACTCACG	ACTCaGCGCC	TGTGCACGGC	TGAcAAAGGA	TTCTACATGC	TCCCacGCAC	1560
GTGTGCGcAG	CGACTCGTAC	ACACTACGCT	GGACCTGTAT	CACCTGGCCA	ACAAGCTCAA	1620
TCTGCGCAAC	AAGAATTGCC	TCCACCTGCC	CTGCCCCGGT	CAAAGCCCCG	TCTCGGTCCA	1680
TCGCCCCACTC	CTCTAGCCAG	GAGTCTCGGC	ACCTTTCCCG	AGCGCTTTAC	TTTTTAGTGA	1740
AATAAAAAAC	CGTCCAGTGG	TCTGCaGcTC	CGCAGGCTAC	TGGACGGCTC	GCACCTGCTG	1800
GCTCTAtGCG	CGGCCGGCGC	TTCCGAGCAC	TTCTTGTTT	TTGTGCATGT	ACAACTTCTT	1860
AAGCTCATCG	CGCGCAGGAC	CCAAATACTT	TCTCGGATCA	AACTCATCTA	CCTTGGTGGT	1920
CAGCACCTGC	GTATAGCTGC	AGTCATAGCG	AGGCGACCGT	CCGAGTCAAT	GTTACACCTG	1980

CACACCGCGC TTTTGGCAGC TTTCCGCAAC TGCTCTTCTG GATACCCACA GAATCCGGCA	2040
GATTTCCACC GTACCTTTCA ACCTCCCGTA CGTACTCAAC GGGCACAGAC GAAGCACCGT	2100
GCAGCACGAT GGGAAAGCCA GGAATACGCT TTTCTATCTC TGCAGGATG TCAAAACGTA	2160
GCGGAGGGGG GATCAACACT CCATCAGCAT TGC GCGTACA CTGCTCTGGC GTAAACTTTG	2220
CTCTCCCGTG ACTTGTTCCG ATGGAGATGG CaAGGGAATC CACCCCGTT TTTTTCACAA	2280
AGTCCTCAAT TCGTCAGGCA TAGTGTAGTG GCTCTTCTCT GCCACTACAT CGTCTTCCAC	2340
ACCAGcGAGT ACCCCAAGCT CCCCTTCCAC GGTGACATAG TCCGCACGCG CATGGGCATA	2400
CTCGCACACC TTCCTGCTTA GCGCTACATT CTCGTCGTAC GGCAACGCCG AACCGTCAAT	2460
CATCACAGAC GAAAAGCCAC TCTCTATGCA GTCAATGCAC AGCTCTAGGC TGTCAACCATG	2520
GTCCAGATGC AAAACAATGG GAATATCAAC GCCGAGCTCA TGGGCATACT CAACTGCGcC	2580
GCGTGCCATA TTGCGCAGGA GCGTCGCATT TGCCTACTTG CGCGCACCGG AAGAAACCTG	2640
CAGAATGACG GGAGAACGCG TTTCAACACA CGCCTGTATG ATTGCCTGGA GCTGTTCCAG	2700
GTTGTTAAAA TTATACGCAG GGATCGCGTA TCCGCCCTTT ACTGCCtTTG CGAACAGGTC	2760
CTTGGTATTC ACCAAACCGA GTGCCTTGTA ACTAGTCATG AGAACCCCTT TTGTTAGGAT	2820
TGCTTCGAGA AGAGTCACGA AATAGAGAAG CGTGCCACCC TCGGCAAGAG GGGCATGGTA	2880
GGGCGATCGG GACGCTCTAG TCAACCGAAG CGCGAAGGCT TGAGTCCACA CGTCAGGCGT	2940
TGGAACGGCA GCAAGACGAT TTGGACAGGT ACCACGCGGG AGGTTTGACA AGCTATTTCT	3000
CCATGCGCTA GAATGCGGCG AGCTGGCGCC TGCAGGCGT TAGGGGTGGT GAAAAGGAGT	3060
TTGCGAATGA AACAGGGCTG TTTTATGGTG GCGGGCTTTG CGCTGACGTG CGCGTTTTTG	3120
GTGTCCCCC TTGCGGCGCA AAGGTCAAG GTCAATTACC AGGCATACTT CA	3172

## (2) INFORMATION FOR SEQ ID NO: 26:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24699 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

CGTTTTTTTA ATGGGGTAGC CAAGCCAGCA TCCACCATTT TCTGCATAAT GGTGTCGTAC	60
TCTTTTTTCG AACCGTCGCA GACGTAGACG GTATCTGGGG CACAGAGTGC GACCATCTCT	120
TCTATCCACG CCTTTGCTCG AGCGTGGGCA ATCTCGTGAA GTTCCATAAC GCCGCTCCTT	180

GGTGCGTAGC	GTGCTGCACG	GGTATTCCAG	GCACGTATCG	CCCCAGAAGT	AkAGCGCGsw	240
AaAGGTAAAT	AAAAAAGACC	TCTTCAAACC	GAGTGTCTCT	GTCACCGCAG	GaGCCGACAT	300
GAGCGGTGTT	CTTTACCTAG	GnCGTTTCAC	TCTCTGTCTA	TTACCTGTCA	GTTGTTTTTC	360
TCAAAAAGTG	ATGACGTGTG	CCGATACCGT	CAGGGGTGCG	CAAGAGGTTT	TTATGCTATG	420
TATCTACGTT	GAGCTTCCCT	ATTACTATCA	AcTGACGCGC	ATCTTCCCTG	CTGACATCGA	480
ATCGCTATGT	GCGCGTATGA	GAAGGTTCGC	TGTCCACAAC	GGTGCTGCCC	TCCACGAGGC	540
ATCGTCCGTT	CGTATCTTTG	CATTTGAAGC	ACACAGTCTC	GGTTCTGTAT	ACGcCGCGGT	600
ACGCTGCGTG	CGTGCGCTGT	ATCAAACACT	GGACACATAC	GAAAAGCAGG	TGAAGGAATT	660
TCGTATCCTC	ATGGACGTTG	TTGCTGACGA	TGCTTCTCCC	TGTCTGATAG	AAGATCGCTT	720
CCATGCATAC	CGCAGTACGC	TGATTCCFGA	CCGTGGTTTT	TTTGCATCCT	TTCGTGCAAA	780
ACAGCTTCTC	AAGCATTACC	TTGAATTTTT	GCCACTGCCA	GCGCTGAATA	TGTACCAGGT	840
TAATGGTTTT	CTTTCACTTT	GTGCGGAAAA	ACCTTTTCCA	CAAGGGGTAA	CCACGCACTG	900
CATAGTTGTG	CGTACCACCT	CTTCATACAT	GAGTGCTCTG	TGTAATTTCA	TGGCGCTCCA	960
TCCGTTGTCC	GAAGCGGTCT	ACTCAACGCT	ATCTGAGGAA	ACGCGTGCCT	TTTTTTTTCA	1020
TCTGCGCGCT	GCGGTGTCTT	TTTTTAAAG	ACGGCGGTAT	GATTCTGTCT	TTCCCCAATA	1080
TTTAACCGAT	GCATTTCTTC	AGTATGTGGG	TCTGTACTTT	AAGCTTTATT	ACGAAGCGgC	1140
GCCAAATGcG	GCGCCGCCGC	CCATTTATGT	AGACCCTTGT	GCTGGACATG	AGAGCCAAAA	1200
GCAGGCAGAG	AAAGTACTGA	TCGTCAGTCC	ACATTCTCCC	CTTATGCGGT	TGCCTGCATC	1260
CTGCGCAGAT	ATTGAAGCTA	TTCCGCAAGA	TCTAGCAGAA	GTCATGTATa	CGCTTTCGCT	1320
TGCCTCCCGT	TATATTTTCG	CGGACGAAAT	AGAGGAATTT	TTTCTGTTTT	TGAAAAAACA	1380
TGctGACTTC	GTCGGTGATT	TATTTGACAA	AATGTTTTGT	ACCCAGGTGA	CGATGGTGCC	1440
GCACAACGCG	TATGCCATTC	CAGAGGATGT	ACACGACAGT	CTAGAAAAGC	GTGTGCGCGT	1500
GAAAATGCCT	GTAATACGCG	AATGTATTTm	wwcCCTTCCT	TTGGAAGAAA	TATCAGGAAG	1560
GATCGCTTTG	TGCTAGTACG	GATCTGCTCA	GAACCTTTCCA	GGAGCTTCAG	TACAAATACA	1620
CATCCGATTG	TGTGTTACAC	AGCTTGTTTC	ATACGTATTC	TGACGTGCAG	ATTGCGCACC	1680
TACAGGTAGA	AGAGTACACC	GGCACGGATG	TCGGCGCAGT	GTTAAAGGTA	TACCAACACA	1740
CGCTGCTGGT	GGGCATGCGT	GAAGACGCAG	AGGCCGCGTT	CAGAGAAGCA	AAGGCTTGTC	1800
TGACAACACT	GCAGGCGCGG	CGTTTTGTGT	CCGCTGAATA	CCGGACCTTT	TCCCTCTTAG	1860
GATTTCTAAC	CATAGGTCAG	AGCAAATTTG	AAGACGCGTT	GGTGTATTTT	GGCTATGCAC	1920

TCGATGATGC AGAACAGctG CGCGACGGTG ATTTTCTCTG TTCCGCGCTT TTTCATTTGA	1980
GTATTACCTA CTTTTTGCAG CATAACTTTA CCCAGGCGCG GCTTTTTCTG AGTAAGCTAT	2040
CCGATGCGAT ATCCACGTAT TTTGAGCAGC GATGGAAAAC TGTCACTCTG TTTATGCAGG	2100
GCAGAATTTT TCTCAGCCTC GGGGAGTATG CACAGGCGCG TCGGTGTTTT GATGAGGCTG	2160
CCGATTTTGC ACTGCAGTAC TTTGAACACC AAGAACCCTT GTGCAGAGTG TGGGCTGCAC	2220
ATGCACGGCT ACTTGCGGAT AAGTCGTATG CAGCGCACGC GCTGTTTCAG GACATGTGTG	2280
ATCAATACCC TGATGCATAT CTCTTTCTTG TAGAAAGCTA TGTCCGCGCA GAATGTTTTG	2340
ACGATCCAC GTTGTTCCTG TCGTTTCTG AGGAAACGAC CTCTCGCGAG CCATGTGTGC	2400
CGTCCTTCTC TCTTGATACG CCGATTTACT CAGGGTTCTC CTGCGCAGAA GATCTGGTAT	2460
GGGGCAGGCA GTGTGCGTTT GCAGTGAGTG CGCagCACAG tACGGTATTT GCTCATTACT	2520
ACCATTGCAG GGTGCATCTG CACCGTGCCG AGGATATGCA AACATTCCAC CACCATAAGC	2580
AAAAACTTGA GGCCATTGCA CGTCGCGCGT TTCAAATAGG TGATCCGAGT GCTGCGTTGT	2640
TTCTGTACCT CTGCTATGAT GTGTCCTACC GCGTGCACGG CGCAGAGGCT GCTGTCACGA	2700
CAGCGCACCT GAGTAGGGCG TTTAAAGTGA TGCAGCGCag CGTTGCGTAT ATGTCAGAAA	2760
ATACCGTTTCG CGCACAGTTC ATGCAGGATA ACTTTTGGA TGCAAAACTG TTTGCCGCCG	2820
CGCAGGCAAA CAAACTCATT TAAAGCAGGG GGCACATATG CGGTCAATTG TGGCATTATC	2880
GGTCTGCCGA ATGTGGGGAA GTCGACAATT TTCTCCGCGC TCACTGCAAA CGTCGTGGAG	2940
GCGGCGAATT ATCCCTTTTG TACTATCGAA CCTAACGTGG GTATGGTGAC AGTACCTGAT	3000
GTGCGTCTTG AAGCACTGGC TGGTCATTTT CGGCCAAAGA AAACGGTGTA TGCCTCCATT	3060
GAATGTGTGG ATATTGCTGG TTTGGTAAAA GGTGCCTCGC AGGGGGAGGG ATTGGGCAAT	3120
CGTTTTCTTG CGCATGTGCG AGAGGTTGGA GTACTTGAC ATGTGGTGCG CTGTTTTGAG	3180
CATACGGATA TCGTTCATGT ACATAATAAG GTCGATCCTC TTTCAGATAT TGAAACGGTG	3240
CaTATAGAGC TGGCATTGGC AGACCTGGCC TCGGTAGAAA AACGGGCTGT GCGTGCTCAA	3300
AAGGAGTCGC GTATGGGAAA GTCCcTTCAA AAGGAAAGCA CGCTGGTATT ACGGGCACTC	3360
GAATACTGCG CGAATATTTA GAAATGGGAA AGGCGGCATG TATGGCGCCG CTGTGCGATG	3420
AGGAgCGCAA ccGGTGCGCG ATATGCGCTT GTTGACAATG AAGCCGCACC TGTACGTGTG	3480
CAATACAGAC GAAAGCGGCA TGCAGTACGG AAATGATTTC GTGCGCGCGG TGCAAGAGCA	3540
CGCACGTGTG CATAACACGC AGGCAATTGT TATGTGTGGA AAATTTGAAG CAGAGctTGC	3600
GCAGCTTTCT GATGTGGCAG AGCAAAACGC CTTTTTGCAA GAATTAGGGT TGCGCGAATC	3660

aGGACGTgCG GcTTGCGCGC GCAGTGTATT CCCTGATGGG GTTGCGTACC TTTTtTACCG	3720
CGGGCCCTGA GGAGTGTGCG GCGTGGACCA TTCGGGCAGG GCTGCGTGCA CCGCACGGGC	3780
AGGAGTGATC CACAGCGACC TTGAGCGTGG TTTTATTCGT GCAGAAACGT ATTCTTTTCA	3840
TGAtCTTks TCctGTGGGA GTGTGGCAAA GtGAGGGAGG CAAACCGCGT TCGGCAGGAG	3900
GGGAAGGAAT ACGAGGTGCA AGACGGGGAC GTTATCtTTT TTAAATTCAA TGTGTGAAAC	3960
ACAGGCGCTC CgTTCCGTCT GTGCGCCgTG TGCGATACat GAGCCTTGAT TCTGCGTTTG	4020
AAAGCAGGCA CAATGctCCC GTGCAGCGTA TCATATCTTG GAATGTGAAT GGAATTCGTG	4080
CCATAGAGCG GAAAGATTTT CTCAGCTGGC TCGCGCGTGA GGCGCCTGAT GTTCTCTGTT	4140
TGCAGGAGAT TAAAGCGCAT GAGTCGCAGC TGAgtGTGCG CTTCTGTGCTC CGGTCTGGAG	4200
TGCTGGGGCG GGGGGTACGT ACTATACCTA TTTTCACAGT GCGCAGCGTC CTGGATACAG	4260
TGGCACGGCG CTGTTcAGTA AGCGCGCGCC AGATGCGGTG CGTTTCTTTCG GGGTTCGGC	4320
TTTTGACTGC GAGGGGCGGA TGCTTGCGGC ACgCTTTGGC GAGCTGACGG TGGTAAGCGC	4380
GTATTTTCCG AATGCGCAGG AAGGGGGCAA GCGGCTCGCG TATAAGCTTG ATTTTTGCGC	4440
AcGTTTTCGTG CGTTCTGTGA TGAAGAGCGT ACGGCCGGGC AGCACGTGAT CTTGTGTGGT	4500
GACTACAACA TAGCGCATAA GGAAATCGAC CTGGCACATC CTCAGGAAAA TGAGGGGAAT	4560
CCTGGATTCC TGcCTCAGGA GCGTGCATGG ATGGATACAT TTACGGAGGC AGGCTATGCG	4620
GATAGCTTCC GAGCCTTCTG CACAGAAGGG CAGCAGTACA CGTGGTGGAG CTACCGTGCC	4680
CGTGCAcCGC CGCGTAACAT TGGATGGCGC ATCGATTACC AGTGTGTGGA CCAAGCCTTT	4740
TTAGCGCGCG TGACCTCTTC GCAGATACTG TCCGAGGTGA CAGGATCGGA TCACTGCCCA	4800
GTGTGTTTGA CGTACGCGGA CTAATCCGTT TCCGGGGTGA GCGGCACGTC CGCGCAAAct	4860
AAGACGTACC CGCGCGCACA GGCAGCGTCA GAGGTGGTAG CGAACGTCCA CACCCGCGGC	4920
TATGAACTGT GCGGTGCGCG TGTGGTCTG CTGTCTATCT TCTTCAATAA TCTTTTCGCA	4980
TGACCGGGGT ACGCCGCTGT ACGTGGCGCT TACCCCAAG GACCAGTGCT CTGTCAGTTG	5040
AAAATAGCAC CCCGctGCCG CCTTGAGCAC AAGACCGTAG TAGGTAGACG TGTAAGTAATG	5100
CTGATAATTG AAGCCAGCCC CTACCGTCAG TGGCAAGCGG ATGCGCCAGA AGGCAACCGT	5160
GTACCCGGCA GTGAGGGCAA CGGAATTGC AAGTAATAG TACGGAGTAG TGGGACTGTA	5220
CGTATTGTTT GGATAGCTGC AATGGTACTG CACACTTGCG TCAATCCCGA GCGACAGGCC	5280
GCGGCACACA AAGTGTTCaA ACCCTAACGC CGCACTGAAC GCGGGGTAGA TGTACTTGTG	5340
CCCGTTGGTT TGCGCGTTGG CATTACGGTC GTCCCCGCGA CCGCTGTTAC ACCAATCCAC	5400

TTGAAAGAGG	GGCACC	CGCGC	CCATGG	CCGA	AAGGGT	TATAG	TACTCC	GGCC	CGCCG	CAGTA	5460
GTGTCCCACG	GGTCCG	CGTG	CACCGG	TGT	GCAGCT	CCCC	ACACTC	CCCGC	GCATAT	TCCC	5520
AGCACCGGGC	CGACCG	CCCCA	CCACTT	CAAT	TGTTTC	CATAC	CCCCTC	CCTAA	CGCCG	ATCCT	5580
CTTACGCGTC	TCGT	CGAGGA	CCTACT	TCCAT	TCTAC	CCCCC	CCCCAC	GGCT	GTTTG	TCGAA	5640
CCCTTTTAA	AGGGT	TTCGTT	CTCGC	CGCT	GGG	CAGCAG	CGCGT	GAGGC	GCCTAT	GCCA	5700
TCGGGAGCTG	CGTTTT	TCTT	ATGCCCC	CACG	AGGGG	ACTGC	GGGGT	ATGTC	GTGCG	TCCGC	5760
ATGGGTGTGG	TATCGG	TGAG	AAAGAC	ACCC	TGAAAT	ACAT	TGCTCT	ACTT	CGTACC	AGGA	5820
ACTGCAGCAG	CAGGGG	GAAC	AGGGAC	ACCC	TGGGT	GAAAA	GACTGC	CACCA	TGCTAG	GATG	5880
GGGAATGGAT	ATGT	CCAAAA	GTGT	GATGCT	GTGTT	GCCTG	TTGAGT	GTAC	AACCCT	GTTA	5940
TGCCGGGTAC	GTGTTT	GTTT	CCCCAA	AGCT	TGGCGT	GTAT	GGAGA	AAGCAT	TGGGCG	GTCC	6000
TGACACGGTG	GGTAA	AGCGG	TCAAG	CAGGC	CGACGG	TACT	AAGATT	GTCTC	CGAAG	ATATG	6060
GTACTACGCG	CCGCTA	CCCC	GCTTTT	TGGC	GTGGAT	ATAG	GCTATC	AGGC	GGATA	ACGGC	6120
CTGTTGTTCC	GGGTGA	ATTT	GGATG	CGGCA	CTCACG	CGCC	TTATGT	TTTCG	CAGCC	AGTGT	6180
GTGGTGGGCT	ATTCCT	TGCG	GTTTCG	GCTGG	GGGGGG	GGGT	ACGTCT	CTAT	CGCTTC	GGGA	6240
ATCGAGTGTA	GTGCA	ACGGT	CGATG	ACGCG	CAGTAC	GAGC	CCTAC	ACGAA	AAATG	AGCAG	6300
GGGACTACTG	TTGCCT	CCTAA	CACCGT	GTTC	CCGTGC	ACGG	TCTTGG	GAGGC	ATTGGT	GCGT	6360
GATCCGGCCC	TTACCG	CAGA	TTACCT	GTCTT	TACGGT	ATGC	AAAGCT	GTTA	CGCAAT	TCCG	6420
CTCCATGTGG	GGGTTT	CGTA	TTACCT	TGCC	AAGCG	CTGGG	GTATTG	AGTG	TGCGCT	TACG	6480
GCCTCACTTG	GCATTT	CAAT	GCGGAC	GGAT	GTGCG	CGTCC	CCTACG	CGGT	ACGCAT	AGGG	6540
CCGGTATTCC	GCGTGT	AGGG	CCTCCG	GTGA	GCCGCT	CTCC	TTCCC	ATAAG	ATGGCG	TGT	6600
TGGCTGGGGC	TGGGGC	TGGG	GCTGGG	GCTT	TCCAAT	TGGAC	GGGCAT	GTAC	GTACGG	TCCT	6660
ATGGAACCTC	GTGTGT	GGCT	GCGGCT	TCCG	GTAGGG	CTGG	GACTCC	GGCT	GCGGCT	TCCG	6720
CTGCTTGGGC	ATAGCC	GCTA	GACAGT	GTGG	AGTTCT	TCCG	GGCGAC	TGCG	AGCCG	AGAAG	6780
TAGATGTCAA	CTCGGG	CTGG	GGGTAC	GGCT	CGGGCG	TGGA	ACGAGG	TTTT	TTGTGT	GAGG	6840
GGGATGTGCG	CGCGT	GTCTT	GTTCT	TGCCT	CCCACT	TCTGT	AAGAG	CAGGA	ACCGC	ACCAG	6900
GGACGACGCC	GGGGAC	CGCA	GCAGCT	TGCT	TGTT	TCGTACC	GCCGT	ACgTG	CTGGGG	GTTA	6960
CTCCTGCTGG	GACgTT	TGCCG	TTTGGT	TTGC	CCTCCC	AGTC	GGTGT	TAGGG	GGgcTG	CGCC	7020
TAGCTCCAGT	GCACG	CGTCC	TCCCTG	CTTG	AGGGGT	TGGG	CGCCAC	CATT	TTTTTC	CAGAT	7080
GCAATGCCCC	GTGAGg	TTTG	CGCagT	CGTG	CTCTCG	CATG	GCTATG	TtTC	TAGCG	AGAAA	7140

TACTCCCTCG	AATACATTGC	TGGCCTTCGA	TGCGGGCGGA	CGTCCCACAC	CGGGAAGTGG	7200
ATGTCGGCTG	GGGCTCGGGC	GTGGGCTTTT	AGGACTTTGT	AATGGACAGG	CATGTACGCC	7260
TGCGTCCAT	AAGATGTCGT	CGGCTGCGGC	TGGCACTGCG	GCTCCGGCTC	GGGCTCGGGC	7320
GTGGAACGAG	GT'TTTTGTG	TGAAGGGGAT	GTGCGCGCGT	GTCTGTTCT	TGTGCTCCAt	7380
TCGTACCAGG	AGCAGGGGcT	GCAGCAGCag	CT'TTTTGT	CGTACCGCCG	TACGTGCTGT	7440
GGTTTGCTCC	TGCTTGAGACG	ACGCCCTTGC	TGTCTTTGCC	CTCCAGTGC	GCACCTTCCC	7500
TGCTTGATGG	CGCCACCATC	GGATGCAATG	CCCCCGACAC	GTCTGAGAAG	CTAAACGAGC	7560
CTCCACATTC	ACGCagTCCG	CGCcTACGGT	GCCCTGCGCT	CCGTCTTTCT	TACGCCCCAC	7620
GAGGCTGGCG	CAGTCGTGTG	CGGTCATGGC	CATGTTGAGA	AATACTCCCT	GAAATACATT	7680
GCTGGCCTGC	GATGTGCGTG	AGGCATCCCC	ATACCGGGAA	GTGATGTTG	GCTGCGGCTG	7740
GGGCTTGGGG	TCCGGTCAGG	ACCGTGAGT	GGACGGGCAT	GTACGCCTGC	ATCCTATAAG	7800
ATGTCGTTGT	TGACTGCGGC	TGCGGCTGCG	GCTGCGGGTA	GGGCTCGGGT	TTTCTGAGTA	7860
GACGAGGGTT	CGTACGTTTC	TCTTATTTTC	GCGCGGGCAT	ACTCAGCAAT	ATTCTGCCTT	7920
CCAtTCGTAG	GAGCAGCAGG	AGCAGCAGGG	GGCGTGGCCT	TTTTGTTCGT	ACCGCCGTAC	7980
GTGCTGGGAG	TTCTTGCTGG	GGCCTTGCCC	TGactGTCTT	TGCCCTCCCA	GTCGGTATGA	8040
GGCAGGTGCG	GTCTGTCCCT	TAATGTGTGC	CTCCTTGCCCT	GAGGGCTCCG	GCGCCACCAG	8100
TTTCAGATGC	AATGCCCACG	GCATCGCCTG	AGAGGCTGAA	CGGGTCTCCA	CACTCACACA	8160
GTCTGCGCCT	ATGTCGCCAT	TCGCTCCGTT	TTTCTTATGC	CCCATGGAGC	GTGCGCAGTC	8220
GTGCGTCTGC	ATGTCCATGG	CATTGGTGAG	AAAGACGTCT	TTAAACACAT	TGCTGGCCTT	8280
CGATGCGGGC	GGACGTCCCA	CACCGGGAAG	TTGATGTCGG	CTCCGGCTCG	GGCTGTGGCA	8340
TAGCCGctAA	CGCACGGGGA	GTGCACGCGT	TTTTACCATG	TCACTTTCAT	TCCGCAGACA	8400
AGGGTGCCGA	AGTGGCGTTC	GGACCAGATG	CTCTCGGCAA	TGCCCATGTA	AGGAGCGTCA	8460
gcAAGCACGC	CCTGT'TCCCA	CTGGGCGCTG	AGCTCCACCT	TCTCGAAGGG	ACTGAACGTC	8520
AgTCCCACCT	GGTACTGGAG	CGCTCGTTCA	TTCAACAGGT	TGCCCCGCGG	GTTAATAATG	8580
TTAAAGCGAT	TGGTTGTGCC	GAGCACGGAT	GTGTGTGGTG	CAAGCCAGGC	GTGGAACCG	8640
AGGGGGATGC	GATAgcTGcA	CCACGCCTTC	CCCAAAATTG	GCATATTGAT	AGTCCCAGGG	8700
GGCACAGCTC	CATTCAgTTC	GTACCCCTCCG	TTATTTCTGT	AACGGATGTA	GGTGAGGGGG	8760
ATGTACACGC	GTGCTTCGAC	GCCGGCGTTC	AGGCCGGTGA	GCAGGTGGGT	GTAGGGGTCA	8820
CCGCTTTTGG	TTTCGAGCTT	AAGGAATCCG	GCAAAATCAA	AGTAGTGCGC	ACGAGTGGTA	8880

GCAAAGACGC	GTTTGCCAAA	GATATTAGTG	CCTGCGGTGG	CAAAGTATAT	GCCAGAAGAG	8940
AGCCACTTCC	AnTGCATACG	CAGGAGCGCG	TCTATGTTGA	GCGCGTTCAT	AGGTGCGCGC	9000
TCAAGGAAAG	CGAGAAGTTT	AGCAGTGACA	ACTCTTGGAT	CGGAAGAGCG	GAAGACATCA	9060
CGTACTCCTT	GCTCTATGTT	CGGTACAAGT	TGCGATACaA	GCGCCGCGAG	GCGCCAGCG	9120
GCTAGCACGG	TTTGAATGGC	GCTGCCGAGC	GTTCCCTTCTG	CAATCAAAGC	AGCAAGTCCT	9180
ACCATCTCTA	TGAGAGTGGT	TTGTTCTGGT	ATTCTCTGGT	GCATCATGAT	ATTGGGAAGG	9240
TTCTGCACGA	GTTTCCCCTC	CACCCGTCTA	AACACTTCCC	TTGCTTTGAG	GATAGCTCTC	9300
TCTTGGGTCT	GAGCATGTGC	GTTACTCTGG	TGTTGGTTAC	GCGCGTCGAG	GGCGAAGGAG	9360
AAGCGGAAGC	CGGCGCCTGG	TTGAGGGTG	AGTCGGCCTC	CTACTCCCCA	CAGGAGTGCT	9420
GTTTGTGTTT	CGTTCTTGGA	GTCTTCGGTA	CCCTTAACGt	AGTTCTGGTC	CAGTGTGGCA	9480
TTCCCTGCCA	GCTCCAACGT	AAGCAGCCGC	TGACGGTCGA	CGCCATAGGA	AAGCGTTGCA	9540
TCGGCCCCGA	AGCCATACTT	GCTGTGCGTG	GTGTCAGTAC	TATCCCAGGC	ACCATTGGAA	9600
AGGAAGGAGA	GGAAACCGAT	GTCCACATCT	ACTCCGCTGT	TTCCCACATT	GTGGGCCTGG	9660
TAGCCGAGTT	TTGCCCCGGA	GCCGGAGAAA	CCAGGGGCAT	AGCGAGTGTC	CTTTTCTGAA	9720
TAGGCACGGG	TGACAAAGGG	TTTCCACAGC	TGGGCAAAGT	TAACCACACA	GGAAGGACTG	9780
GTACCCACTG	TCAGGTAGGC	CCCATAACAG	TGCAGGGTTG	CCTGGAAGGA	AGCGGTAGGT	9840
TTGGTAAAGG	ACAGGGCCGT	TGAGCTTTTA	GAAGACGCAA	GCTCTACTGC	CAGGTCTTTC	9900
AGCTGCAGCT	GTGCCCACAC	CCCTGAGCGT	GCCTCCCCTC	GGCGGGTGTG	GGTGTGCTTT	9960
GACACCAACG	GCAGGGAAAT	AGTCAGACTA	TTGGTAGTGC	GAAACCCATG	GGTGTGCTTG	10020
CCCGGGCCAG	TGCGTGGATT	CTTCTGGAAC	GCAATGCCCC	ACTGGAGCTG	GGCTGTGCCA	10080
CTGAcTGCGG	AGTGAGTACG	CCTGCATAAC	CAGAAGCAGC	ACATACCATG	CCCGCAAGTA	10140
CCCCCGCTTG	CATCACCTGC	CTGCCCACTC	ACTCCCCCTC	CTCTCACTTC	TACCTCACCC	10200
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CGGATGCGTA TTTTGAAAAC GGATACACGT CAAATTACCT GAACAAAGAA GAACACCGGG 23160  
ACACGGCGGA GAAAACGCTT TCGTTTAAGA TCACGGTGGT GGAGCGCGAG CGCAGCCACG 23220  
TCGAGCACAT TATCATTaAG GGAACGAaGA ATACAAAAGA CGAGGTATC CTGCGTGAAA 23280  
TGCTGCTGAA ACCGGGGGAT GTGTTCTCTA AGTCAAAGTT TACGGATaCT TGCGCAATCT 23340  
GTTCAACCTG cGCTATTtCT CGTCGCTGGT GCCGGATGTG CGGCCCGGCT CTGAGCAGGA 23400  
CCTGGTGGAC ATTATCCTGA ATGTGGAGGA GCAGTCGACG GCAAACGTGC AGTTTGGGGT 23460  
GACGTTTTCT GGGGTGGGGG AGGCAGGCAC GTTCCCCCTT TCGCTCTTTT GTCAGTGGGA 23520  
AGAAAAGAAT TTTTGGGAA AAGGGAATGA AATTTAGTA AATGCAACCT TGGGGTCTGA 23580  
GGCGCAGAGC CTGAAGCTCG GGTATGTGGA GCGCTGGTTT CTGGGCTCTC CGCTGACGGT 23640  
GGGCTTTGAC TTTGAAcTTA CGCACAAAAA TCTCTTTGTG TACCGCGCGG GTTCATACGG 23700  
CAACGGGcTG CCGCACCCgT ACACGAGCAG GGAGCAGTGG GCTAGTTCCC CTGGGCTGGC 23760  
AGAATCGTTT CGCCTCAAGT ATTCGCGCTT TGAGTCCccc ATCGGCGCGC ACACCGGGTA 23820  
CCAGTGGTAT CCGCGCTATG CGGTCATTAG GGTGAACGGG GGGGTGGACT TTCGGGTTGT 23880  
AAAGAATTTT TACGATAAGG ATAACAATCA GCCCTTCGAC CTGACCGTAA AAGAGCAGCT 23940  
GAACTGGACC AGTATCAATT CGTTTTGGAC GAGCGTTTCG TTTGACGGGC GTGACTTTGC 24000  
GTACGACCCG TCCAGCGGCT GGTTTTTAGG ACAGCGCTGT ACGTTCAACG GGCTCGTTCC 24060  
CTTTCTCGAA AAAGAGCATT CGTTTCGCTC CGACACCAAG GCCGAGTTCT ACGTTACCCT 24120  
GCTCAATTAT CCGTCTCTG CCGTGTGGAA CTTAAAGTTT GTCTTGCTT TCTACACCGG 24180  
TGTGTCCGTT CAAACGTATT ATGGACGGAG GAAAAGCGAA AACGGAAAGG GCAACGGGGT 24240  
GCGGTCCGGC GCGCTGGTAA TAGACGGCGT GCTGGTAGGG CGCGGGTGGA GCGAAGACGC 24300  
AAAGAAAAAC ACCGGAGACC TGCTGCTCCA CCACTGGATT GAGTTCCGCT GGCCGCTGGC 24360  
GCACGGCATT GTGTCCTTTG ACTTTTCTT TGATGCGGCA ATGGTGTACA ACATCGAAAG 24420  
TCAGTCCCCA AACGGGTCAT CGTCCGCCAG CAGCTCCAGC AGCAGCAGTA GTAGTAGCAG 24480  
TAGAACCACC AGCTCTGAAG GACTGTACAA AATGAGCTAC GGTCCGGGGC TGCGCTTTAC 24540



340

ATTGCCGCAA TTTCCGTAA AATTGGCGTT CGCAAACACC TTCACGTCA<sup>n</sup> CCGGCGGCAT 24600  
 CCCAaAAACa AAGAAAAATT GGaATTTTGT GTTGTGCTTC ACGGTAAATA ATTTGTAGCG 24660  
 TTCCCGTGnC CGTTTTGAAA nGGTCCGGGG GCTGCGTCC 24699

## (2) INFORMATION FOR SEQ ID NO: 27:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4637 base pairs .
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

TGCCATGGAA ATGTGACCTA CGCCTCCCTT TATGGGCCAC AGGCTGGGAA TGTCAGAAAA 60  
 AAGTGCTGTT TGCGAATTGA GCAACTTTCC TATCTCCCGT ACTGGCTGCA CAGAGTTCTG 120  
 AAAATAGGCG GCTATGCGCC GCAGTTCCTC TGGCTCCGAC CCAACGCCCT GCGCGTTTTT 180  
 GCCATGCTGT TCTGTCACTC CAACGTTTCC CTTTTGTGCT CCATCCTTTG CTGACGCATC 240  
 ATCCGGCTCG TTAGACTGGT TTGTGTCGGA TACACTTCGT ACTGGTTTTT CTGCCCCAGA 300  
 TTGGAGCCCA CTGAGGCCAA CCTGAGAGAA AGTTTGGGAA AGGGAAGTCT GGAACGCCTT 360  
 AGAAGTGCGA ATAAGTTCTG CTGCTTCTTG GCGCAGGAGT GCAAGGTGCA CCTGCGTTCT 420  
 GTCCACCTCT GCGCGGACCG CCGCCAGGAA CgTGC GGAGG TGACAGACTG ATGGGCAAAC 480  
 CAAAAAAAG AAGCCAACAC GCCAACACCG CACAGAAGAA CGCACAAAGAG CGTGCGAGCG 540  
 GTAGTACAGA AAGTCCGGGC CGCACACTGA GAGTGTGGA CTAACATGAC GGTGAGTTCT 600  
 GCACGGCCTG CGGCGCCAG GCGCGCTGCG GCTTCGCGTA CAAGCCGCGC ACAACGCGTA 660  
 CACCGGTCAA TACAAAAACG AACGAACGCG TACTCAATAC GCTTGTATCT TCGGATGCGT 720  
 GCCATGCGCA AGACCTCTCC GGGGAAAACG GTATCACCGC GGTAGATAC TGTCAAACCG 780  
 TGGAActACG GGACGGTCTG AGCACGAGGA CGCGGGCACC CAACCCAAGC TTCGGTTCTA 840  
 CTTGCTCTTT TCTTTAAAGA GGACCAAGAG GGCACACGAG CCCCACCCT GGCCAGGAGC 900  
 GAGCACTGGC TTGGCCCCCG CGCTGAGGGA AAAGCGGGAG GACTTTTCCG TGCTGCTATA 960  
 GCTGATTGTT GATATCAGCC AACGTTTTGC GCAGGGCAGG GTTCTGCGCG TAgtAGTACT 1020  
 GCTCGAGctC CGCTGCAGTA AGCCCAGAGA GCTCGTGGCT CATGTAATGG AACCACTCGT 1080  
 TATCTGCCTC GCTACGTACC TCGTGCTTGA TGCACCAGTA GTCCGGCAAC ACCGGGGGCT 1140  
 GTTTTTCTCC CACGAATACT TTGTAATTGA AGACAGCCAC GCGGATGTCG CCACGCGCAA 1200

GGCCCTTTTG	CATAAGCAGG	GAAGCGATGT	AGTTGATGGT	TGCGCCTGAA	TCCAAGATAT	1260
cATCTACGAT	GAGCACCTTA	TCCCCGACGC	GTAGGTA	AGGAGGGTAG	GTCCAGCCAT	1320
CTACGCTGAT	GAcGCGCCss	TTACGCAAAT	CACAGTGCGA	GTGAGCAACT	ACCGCTGCGT	1380
ACAGGATAGG	AGGCTCTGCC	TTGTACGCGA	TGGTTAAATA	CTCATTGAGC	ACGTTACCCA	1440
GATATACTCC	ACCCCGTATG	GGGACGTACA	TAACCGTTGG	CACGAACCTG	TCTGCCACGA	1500
TGCGCCGGGC	CATACCGAAA	CCCTCATCAC	GGATCACATT	GTACGGAATA	AATCGCTTTT	1560
TCACGTTAGC	CTCTCCTGCA	CGAGCACGAA	AACACCCCTAC	ATCTAATGCT	TTTTTAGCAT	1620
CATGGCAAGC	TCTTTTCTA	TTCGTGTCGT	GGCCTGGAAC	TGTCTTTGTT	GAAAGTTCGC	1680
CTGAATATTT	TATGCTCCTG	CGCGAGGGCC	CCCGTGATAG	AAAAGTTGGA	AGAACTGCGC	1740
GCTCAGTGGA	GAAAACTACA	GCAGGAAGTG	GAGAATCCTT	CGCTTTTCTC	TTCCACTCAG	1800
AGTTATCGTG	AACGTATGCG	CGATCACGCC	TATCTTTCCA	GACTGATGGA	AGAGTATGAT	1860
CGCTATTTGC	TTACTGAGAA	GCAGTTGGaA	GACGCGCACG	TTCTCATCCA	AGATGAGTCG	1920
GATGCTGATT	TTAAGGACGT	TATTCGGCAA	GAGATCCGTA	CAC'TTGAAGC	TGCACTGCAC	1980
ACGAGTCAAA	AGCGACTAAA	GACGCTGCTT	AT'TCCCCCG	ACyCTTTGCA	AGAGAAGAAT	2040
ATTATCATGG	AAATTCGCGG	CGGTACCGGC	GGTGATGAAG	CAGCGCTCTT	TGCTGCAGAT	2100
CTATTTAGAA	TGTACACGCA	CTACGCTGAG	TCAAAACAAT	GGCGCTATGA	AGTCCTTGCA	2160
GTGAGCGAAA	CAGAGTTGGG	AGGATTTAAG	GAAATTACGT	TCTCTATCTC	GGGGCGCGAT	2220
GTGTATGGCA	GTTTACGTTA	TGAATCGGGT	GTGCATCGCG	TTCAACGTGT	CCCTAGCACT	2280
GAAGCGTCGG	GGCGCATCCA	TACCAGTGCG	GTTACCGTTG	CAGTGCTGCC	TGAGATGGAA	2340
GAGACTGAAG	TGGACATTCTG	TGCTGAGGAC	GTGCGTGTG	ATGTCATGCG	TGCAAGTGGT	2400
CCTGGTGGGC	AGTGTGTCAA	CACCACTGAT	TCTGCGGTGC	GTCTTACACA	TCTAcTACGG	2460
GCATTGTCGT	TGTCTGTCAG	GACGAGAAGA	GTCAAATCAA	AAACAAAGCC	AAGGCCATGC	2520
GTGTATTGCG	CAgCAGAGTG	TATGATTTAG	AGGAATCGAA	GCGCCAGGTT	GCCCGTGCAA	2580
GGGAACGCAA	AAGTCAAGTT	GGTTCAGGGG	ATCGTTCCGA	GCGCATTCGC	ACGTATAATT	2640
TTCCCTCAGAA	CCGTGTTACG	GATCATCGCG	TGCGTGTTAC	GCTCTACAAG	CTAGATGCAG	2700
TGATGCaGGG	TGCGTTGGAT	GACATTATCG	AGCCaTTGTG	TATTGCGTCT	CGAGAGAGTG	2760
TAATCTAGTG	CAAGAACTCT	GTACGATTCTG	ACAGGCGCGT	ATGTACGCGC	GAGCGTTGTT	2820
TCAAGACGCC	CCCTGTTTGC	GCGGACAGAA	CACACCGCTT	TTAGATGCAG	ACCTTATTCT	2880
GTCgAAGTTG	cTTGCGAAGC	CGCGTGCGTG	GATTCTCGCC	CACCAGCAGG	ATGAGATTGC	2940

CTCCGTTGCA CACGAGTTTA AGCGTCTCGT GCATCTTCGT TGTA <sub>g</sub> GGGAC GTGCGTTGGC	3000
GTATCTGACT CGAGAAAAAG AGTTTTTTGG TCTGAGATTC CGTGTCACCC GTGTACGCTT	3060
ATCCCTAAAC CGGATACCGA ATTGCTTGTA GAAAGTGTC TGGCGCACGT TGCGTCCCAA	3120
ATGATGAAGC CGCGTTCAGT ATCTGTGCAT AAAGACACAA GTGCACTGCC TGTCTTGAAG	3180
ATATTCGAGG CGTGTACGGG ATGCGGGTGT ATTGCCATTG CACTTATGCA TATGTTGCGT	3240
GCGCtGGCAC GCCACCTCTC TATGTCATTG CATCC <sub>g</sub> ACAT TTGCATGCGG GCCcTTGCCG	3300
TAr <sub>s</sub> GCGGTA TAACGCGCGC CGACTCTTGG ATGTATCTGC AAATTCGCGC GTAcGTTTCG	3360
TGCACGCAGA TGTGCGTGCT CCTATTCCGT TCTTTTCTCC TTCTGAAGGC ACGGACnTGG	3420
TACAGGAGCG CGGGGTGTGC GTTCCGTATG ATGTGATATG TGCAAATCCG CCTTACtACC	3480
GAGTGC <sub>g</sub> CAA GCGCGCGCGC TGTTGCAGGA CGGGAGAGGG GAGCCTCTCG GTGCCTTAGA	3540
TGGGGGTGCA GATGGGCTAG ACTTGGTTCG CGCATTGC <sub>g</sub> CA CACCACAGTG CCGCAGCGCT	3600
AAAGGAAGGC GGGTGCGTGT TTTGCGAGGT CGGCTCAAAC CACGCACAAC GTGCAGCGCG	3660
CATCTTCCAG GCAGCAGGGT TTGCCACGGT GAAAAATTCA AAAGATCTCT CCGGGAAAGA	3720
GCGCCTGATT AGCGGGATAC TGC <sub>g</sub> CTCGCA GTCTAGAGCT GTAACAGCGC CGAGTGGCTA	3780
GGGTGAAACA CGGCGACTGA GTGGTTATCC TGGCGTTTGC AGGTGGATGT nCGCGCCGCG	3840
TTGGCCGATA GGCTGAGTAC ATGAAGGAGT TAGAGATCAT CCACCATTGC GGATGACTT <sub>g</sub>	3900
CGTAC <sub>g</sub> sGrT TGATTTTGCT TCAAAAAAAT CGGTTTTAAT CAAGTTTGCG TTGCTGTACT	3960
GACTTACCCA GCTCATCGAT TCCGGTTCTA CACGGTGCCC CTCGTACAAG GGCTCAAAGC	4020
CTAAATTTTC GCAACGAAGA TTACCCAAAT ACCGGATATA GTCTGCCACC ATGTGGCGAT	4080
TTAGTCCAGG GATCTGATCC CCAATGACAT AGTCCCCCA CTTAATTTCT TGTTTCGATC	4140
CTTCGCGAAT CATATCGCGA AATAAGCGTA CATTGCGTGC AGTGAACACC TGwGGCTCTT	4200
CCTTTTGCAG TTCTTGAATA ATGGATCGAA AAAGCCACAG GTGTGTGTTT TCATCGCGGT	4260
TGATATAACG AATTTCTCTG ACCGAGCCGG GCATCTTGTT ATTACGCCCC AAGTTATAGA	4320
AGAACATAAA ACCCGAATAG AAATAAATTC CTTCCAAAAC ATAATTCGCA ATTGCTACCT	4380
TCAGCAGTGC GAGTACGCTT TTGTCATCTT GAAACTCGTT GTACAAGTTG CCAATGAATT	4440
TATTGCGCGC AAGCAGGATG CTCGTCGTCC TTCCACTGGT ATAGAATGTC ATGCGTTCTT	4500
CGGGGGAGCA AATGGTGTCC AGCATGTAAC TGTA <sub>g</sub> ACTCTG CGAATGCACA GCCTCTGGAA	4560
AGCCTGAAGG TTAGGCACAG TTAATCTCAT TGCGGTAAGT ACTGACCAAT ATTGGCAGAT	4620
CGCAGTCTGG GATGCTA	4637

## (2) INFORMATION FOR SEQ ID NO: 28:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10820 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

TGTAGACGGG GCACTGAGTG CTGAATGCGC AACGTCTCCA CGAGAGATTC AGAAGGACGC	60
ACGGGTCATG CCCCCACCAA GAATCGTGAA ACTGTTTTTC CTGTACGCG CAGAAGCATG	120
CCGgCTTATT TTGGTTCTAA CGAACATTTA TACGCACGGC AAAGAAGTGG GTGAGCAGTG	180
CCACACCTCC CGCTCCTGCC AGCATGGAAG TGTATACCAC TGTACGCGCA TTGAAAAAAC	240
AAAGTGTCAT GACTGTTGCA GAAAAAGCAC CCATGAGGAG GAATATACAC AACGCAGCGA	300
TTAACCCGAG GAGTGGCAAG CGCGTGCGCA TAGAAAAAGA AACATGCGCG TGTAAGTGCA	360
GCAGGTTAGT CATGTACAGC ACGAGTGTC TGACACGCGC CAGAAGGTCA GGATCATTA	420
GTTGTGTATA CACGTGCACA AAGAAAAACG ACGTATACGC GCCGAAGAGC GCAGACACGC	480
CCGATACGAG GGATACACGC TCAAGTGAGC GAGAAGTAAA GAGGAAAAAC GGCAGGCAAA	540
AGAGGGGAAA AACATAATCA AAAAGAAAAA AGCGCATCCA CTGCTCTTCC ACAAGGGCGG	600
AATCCGGCGG ATAGTACCCG AGAAAAATG AACGAAGTAG GAGGAGAGGC ACAGCAAGCA	660
CGGCGCCGTG CACAAACGAA ATAAGTTCCT GAAGTGGGTC CCCAGCGTCC GCGAAAGAGG	720
AAAAGAACAA AAGAGGCAAC GAAATAATGA GAAATATTTT CACTATCGAT ACCGTAACCA	780
ACGGGGCACC GCATACGGCG AAAGATCACC GCGGGTATGC GTTCGCCCAT CAAAAGTGCG	840
CCGCTTTACA GCACAAGCTC GCTTGAATA TCAGCGTTAC TGTAGACGGC CTGAACATCC	900
TCTTCTTCTT CGAGCCGGTC AATCATCTTC AATACCTTAC GCGCAGTCTC CTCATCAAGC	960
GCCAGGTACG TGTCGGGAAC CATAGATATA CCGGCAGATA GTGATTCCCA CCCCTTGGCC	1020
TGAAGGGATT CTAGGACCGT CTCAAACGTA CCGGGAACCG TGGTGACGGT GAGGACACCA	1080
CCGGCGTTCT GTATGTCTC AGCACCCGCT TCGAGGGCAA GCTCCATGAG AGCCTCTTCG	1140
TCAACCTGTT CGGAATCGTA CTCTATAACT CCTTTGCGAT TGAACATATA GGAAACGGAT	1200
CCTGCCGAAC CTAAATTACC CCCATTACGG GAAAACAAAT TGCACACGTT CGCGGCCGCG	1260
CGGTTTTTGT TATCGGTGAG CACCTCGACC AGAACGGCAA CACCGCCCGG CGCATAACCT	1320
TCATAAACGA GCTCCTCATA GCTACTGCCA GATAACTCCC CCGTACCCTT CTTAATAGCC	1380

CGCTCAATGT TATCTTTAGG CATATTAGCG GCACGTGCCT TAAGGATTGC AGTCCTCAGA 1440  
CGTGGATTAG CCTGTGGGTC ACCGCCTGCC ATGCGGGCAG CAACAGATAT TTCCTTGATA 1500  
AACTTAGTGA ACAACTGCCC ACGCTTTGcg TCCGCAGCTC CCTTAGCATG CTTGATAGTG 1560  
GCCCATTTAC TATGTCCAGA CATGAGATCT TTCCCCTAAT GCCCCAAAAT GTACGTACCG 1620  
GAACGCGGGC GCCTGATGCT AGCACGGTGT GCGCTTTTCT CCAAGTCCCG cTGGCGCATA 1680  
TTGCACGGCC CGCGTAATTA CCGCGGGCTT AAGAAGCACA GACCTAGCAC GTCGGCGCGT 1740  
GTGCTAAATC AAACAGATCT GCGTAGGCGC GCAACACGCC TTCCACCTCT CCTGCTAATA 1800  
TGTGTTGTGC AAGCGTCTTG CCCAGCTGCA CTCCTTCTTG ATCAAAGCTG TTCAAGTTCC 1860  
ACGCAAATCC TTGGAACATA ATCTTGTTTT CAAAGTGTGC AAGAAGTGC GCGAGCGTTT 1920  
GTGGGGTAAG CGCTTTAGgT ATAGCAGACT GGATGGACGC TCCCCGAAA ACGTTTTATT 1980  
TGCATCCGCG TGCTCTTTTC CCCTGGCGAA CGCGACAATT TGTGCGACGA CATTTGCAAG 2040  
GAGCTTCTGC TGACCGTAG ATCCACGGAT TATCGGATCC TGCCCGAGCT GACTATGTTG 2100  
AAAGGCAATG AACTGAAGCG GCACCACCGA TGTTCCCTGA TGCAAATGTT GGTAGAACGA 2160  
GTGCTGACCG TTTGTCCCAG GCTCTCCAAA GATCACC GCGGTCTTAT ACGTTATCGG 2220  
AATGCCGAAG CGGTTAACAC TCTTGCCGTT AGATTCCATA TCTAGTTGTT GCAAATGTGC 2280  
AGGAAAGCGA GCCAACGCCT GGCTATAGGG CAACACCGCG GTGTGCTCGT ATCCCAGAAT 2340  
AGTGCGCTCG TACACACCGA TGAGCGCGTC AAGAAGTGCT GCATTACGCC GTATGTCTTG 2400  
TTCCTGTGCT GCTCGGTCCG CCTCTGCCGC ACCGGAGAGG AAGTGCCCAA ACACcTGCGG 2460  
TCCAAACGCA AGCGTGAGTA CCACAGCGCC ACAGACAGAG GAACTAGAGT AGCGTCCACC 2520  
GATAAAATCA TCCATGTAGA AGGAAGCAAG GTACTGGGGA TTATTTGCAA GTGGACTGGT 2580  
CTCGCTGGTA ACTGCCACGA ACTGTGTGTG CGGTCTTAGA CCTGCTTGAC GAAGgACGTG 2640  
TGCGACGAAA AGCTCATTAC TGAGTGTTC AAGCGTCGTA CCACTCTTTG ATACCAAAAT 2700  
AAAAAGCGTG GTCTCAAGCG GTAGTTTTGA GAGTACAAGC GCTGCGTCGT CTGGGTCCAC 2760  
GTTGGAGATA AAATGTGTGC GCATCTTAAC CGCCTGGTGC CTCTGTGCCC AACCTTCCAG 2820  
CGCGAGATAC AACGCCC GTG GACCGAGATC TGATCCACCA ATTCCAATTT GTACAACGTC 2880  
GGTAAACGGT GCGCCGCGAG ACGTGCGCAG CCCCTTCGT GTACTTGCCs TCGGAACGCA 2940  
CATaCTCTTT CGTATTCTTT TGTATAAAAG GCGTGCATAT CGCGCACTTC GCACGGCAAC 3000  
GAGGCAAGCG ATGACCCCTG CACGCCGAGG CGCGTTAGGT GATGCAGCAC CTTACGTTTT 3060  
TCCCCGCTGT TTATCTGTGC TCCTGCGCGC AGGcGTCGTA CTTTGCGACT AATTCCTGCT 3120

CGTCTGCAAG AGCAGCAAGC GCCGTGAGAA TTTCTTCATT CACTGTTTTC GCTGCGTAGT 3180  
GATAGCGCAG CCCAGCCCCC GCGTCGGTAC AATAGCGCCG CACACGTTCT ATCCCCCTCTG 3240  
GTCCACAGAG TACTGTCTTC AGCGACGGCG CACGAATCGC CTGCAGGcGG GCGTATGCGG 3300  
CACACTCGTC AAGATTTCTC CAATTCACCTG CGCGTTCTCC TTTTATCGTT CTACCCCGTA 3360  
GggTTTACCT ACAGACATAT CGCCGGGCTGT TCTATGTATC AAGACGCGGC ACGACAATCG 3420  
TCGCGAGTGC CGGGTTCTTT TCTAAATCTC TTTTAAATCC TGCTGCCCCG GCCTTATTGA 3480  
CATAGGTTGG ATCCTGGAAC GAGTAGGTAA AACGCGGTG CACGTCGTAT GTTCCCTGCA 3540  
TGAGTGATA CGTGTCTCA GTCATGACCA ATTCTTCATC TGTGGGATT ACCAGAATGC 3600  
GGACGGGTGA ATCGTCTGTA CTAATTTCTC TTTCTGCATT GCGCGTGGG GCCAGTTCAT 3660  
TTTTTCGCGC ATCAAGTCGG ATGCCTAGGT GTTCGAGTCC TCGGCACGCT GctGCGCGTA 3720  
CGTCGCAACA CATCTCTCCA ACActGCGGT AAAGACAAGC GCGTCCGGCT GTTTACCCAA 3780  
AGCTGCAACG TATGCGCCGA AGTATTTCCG GATGCGGTGT ACCTCCATGT CAAAGGCAAG 3840  
GCGTGCAAGC GCGTCTCCAT TTTTCATGGC AGCACACACA TCGCGTCGGT CCACGTATTT 3900  
TCCGGTGATG CCTAGCAAAC CGGACTGTTT ATTGAGAGTG GTGTCGATGT CTGAGACAGA 3960  
CATGCCTGTT TTTCTCATAA TGTAAGAGG AAGCGCAGGG TCGCAGTCCC CGCAGCGTGT 4020  
TCCCATAATC AGGCCTTCTA GCGGGGTGAT GCCCATGGAA GTGTCAAAGC TGACACCATT 4080  
TTTGACACAA CACATGGAAG CGCCGTTTCC AATATGCGCA ATGATTATGT TTGTGTCCTC 4140  
AGCCCTTTTT TTGAGAATGA CAGAGGCGCG CTTTGCAGTA TAAAGAAAAC TCGTGCCGTG 4200  
AAAGCCGTAG CGACGTACCG CGTATTCTTC GTACCACTGC CGGGGCACTG CGTACATGAA 4260  
GCTAGCTTCT GGCATGGTTT GATGCCACGC AgTATCCATA ATGGCACAGT GGGGAACCTGA 4320  
GGGGATGACC GCCTGGGCAG CCTCAATACC ACGGATGTTT GCGGGGTGTG GGAGAGGGCC 4380  
AAGGTCTTGA ACAGAGCGAA ATGTTTCTAG CACGTCAGGA GTCACAACGA CAGACTTTAC 4440  
AAAGCGATCT GCTGCGTGTA GGACGCGGTG TCCAACCTGCC TTGATAAGAC TCATGTCGCT 4500  
GATAACACCG ACGTGCATCG CGGTGAGGGT GCTGATGATA AGCTGCACCG CTTCGGTATG 4560  
GGTAGGGCAG GGACTTTCCC GAACGTGGTT CTCTCGGCCG TGCACCTCAT GCGTGATAAC 4620  
AGATCTGCC TGAGTAACAC GCTCTACCAC GCCGACGGCA ATCACCACGAC GCTCTGTCCA 4680  
GTTATACACC TGGTATTTTA CAGATGAACT GCCGAGTTT AGCGTGAGGA TAATCATAAT 4740  
ACACCTCCAC CGTTTTGGTA ATTTCTCGGA CACCGTAGCA TACACGCAA ATGCGCCACT 4800  
TTCTACACC GTTGGcTTAC ACTGcTTACG CGGATATAGC CCCCAGCA GCGtaTCCAG 4860

CAGCCACTGC GCTTTGGCAG TGTCCACGCG TGCAAGGGcA CGGaCGCGTG GGGATCTGAC 4920  
GCGACTGACG CGAGCATGTC CTGCTTTTCA CGCCCGGTAA CTACGACGTA aTTTCGTGTG 4980  
CATTATTGAT AAGGTGCCCC GTGAAaCTCA CACGTTTCTG ACCGGTGTCT GGGTGAGTTG 5040  
CCACGACGCA ACAGCCGCTG TGGTCCCACA GCTCTATTTT ATGAGGGAAA ATAGACGCGG 5100  
TGTGTCCATC CGCCCCATA CCCAGGAGTA TAATATCAAA GCACGGCAGC CCACGCTGTC 5160  
TTGGGAGCCG TGCTTCAATT TCCTGTGAGT ATGCGGCGCA GCGCTCTCC GGGGCGTCTT 5220  
CTCCCTGAC GCGAAACACC GCGTCAGgAT TTATTTCCAG AGGCTCAAGG AGCGCACTAT 5280  
GGGTCACTGT GAAGTTACTC TGCGCATCCG TGGGGGGTAC GCAACGCTCA TCGCTCCAGA 5340  
AGAAGCGGAG GCGCTTCCAA TCAAGGTGGT GTCGAAACTC GTGCGCCCAA GTTCTGAAAA 5400  
TCTCCCTTGG AGTGGAACCC CCCGACAGGG CCAACCAGAG AATCTCTTGT GTTTTGAGCC 5460  
GAGAATCAAA CACCGAAACG AGGAACGCCG CGATGGCAGC CGCATCCTCA AAAATATGCT 5520  
TCTTCATGGG CGAACATCCT CCTCTCTCCC GCTACGTTCT AGTGTCGTTC AAGGCTCGGC 5580  
ATTACCGCTA GAGTCGGCAG GCAAAATCAT CGCTGAGCAG CGTAGAAGAG GGGTGATGCC 5640  
ACCGTGGAGC ACTCCCTTTG ATCAGGTCGT CTGCaGctTC GGACCCAGC TTCCTGCAGG 5700  
GTACGTAAGT AGAGGACTCT TGTTTGATTT CCATGCGGCA AGAATAGGAT CTATGAAGCG 5760  
CCATGCAGAC TCCACCGCGT CATCTCGATG GTAGAGCGTG TTGTCTCCAT TCATGCAGTC 5820  
AAGCAATAGC CGCTCATACG CGTGGGGTAA GTGCGAATAG GTAAGAGCCG AATACTGAAA 5880  
ATCAACACTG ACGGGAATAG TCTTGAACCC CGCGCCGGGC TCTTTGAGGT CGATTTTAAG 5940  
CTGAATTCCT TCGTCGGGTT GAATGCGAAT GACAAGCGCG TTGCCCTCGC TGCGGCACGG 6000  
GCGTTCGATG TGCTCGAAAA GCGCGATGGG GAGCGTTCGG TAATGGACGA TCACCTCAGT 6060  
GACGCCCCGTG GGCAAACGCT TACCCGTCCG CAGtAGAAGG GAACGTCCAT CCACCGCCAA 6120  
TTGTGCATGT AGCACTTGAG TGCGGcAAAG GTTTCAGTGC ACGAGCGAGG GTCAACGCCT 6180  
GACTCCTCAA GGTAGCCGGG GACGGCTACA CCGCGTATCT TGCCGGCGAC GTATTGGGCA 6240  
CGCACCGTAT GCTGCATGAC GTCGCGTTCT CCCATAGGGC GCAGGCAGTC AAAGACCTTT 6300  
ACGATTTTAT CCCGTAGACG ACTTGAACTC ACGaCGGCGG GCGCCTCCAT CGCGATAATA 6360  
CCCAAGAGGA GTAACAAGTG GTTTTGGATC ATATCGCGCA ATGCACCGGA CTGGTCGTAG 6420  
TAACCGCCGC GGTTTTCGAC ACCTAGTGAT TCGCTTGCAG TAATTTCAAC GTAATCGATA 6480  
TGGGTCCGGT TCCATGTGGG CTCGAAAAGG GGATTGGCAA AGCGAGTGAC CAGGATGTTT 6540  
TGGACCGTTT CCTTACCCAG ATAGTGATCG ATGCGATAGG TTTGGTTTTT CTGAAAGTGG 6600

GCACGCAAGC	TCGCATTAAG	GTGcTGC GCG	GTTTCTAGGT	TGTAGCCAAA	GGGTTTTTCA	6660
ATAACTACCC	TGCGAAAATT	ACCCTGTTCC	CGGTTCAAGT	GGTGCATAGC	AAGCTGCGTG	6720
GGGATAGTTT	CGTACAGGCT	AGGGGGAGTG	GCAAGATAGA	AGATAAAAGTT	GCCCTCGGTG	6780
TGCAGCGACT	GGTCGAGGGT	GCGCACGTAC	GTGGCAAAGT	CGGCAAAGGC	GACAGAGTCG	6840
GTGGGATCGA	ACGAGAAGTA	GTGGATCTTC	TGCAGGAATT	CGGTGAGGCG	CGCCGGGTCTG	6900
TGCGGTGTGC	GCACTGCATG	CTTTGTGACC	GCCTCTGCAA	GCCGTGCGCG	AAAAGACTCT	6960
GTAGACAGAG	CCGTACGCCC	TGCGCCGAGT	ATACCGAATG	TACGGGGCAG	GAGCTCTTGC	7020
TCAAAGAGAT	CCCAAAGCGA	GGGGATAAGC	TTCCGCGCGG	CAAGTTCGCC	TGAAGCGCCA	7080
AAGATAACCA	GGATGTGCGG	GCGGACCGTG	CCGCTGCCAC	TGATTTTCCC	CATAAACCGC	7140
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TGGCCCATAT	GTTCGACCAC	GTCAGGTCCT	GTCCATTCCC	ATTTGCGCCC	TTTTTCAAAT	7320
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GCCCCACCAGG	AATGCGCAC	GGAACATAAG	AAAGGCAAGC	CCCGCGTCTA	ATTCTGTCGT	7560
GAACGCGAAg	cCGTTGTGCG	CTATTACCCC	CACTGCCAAA	CCGAGCGTCG	GGGTGTACAA	7620
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GGGTGTGAGA	GTGTCAAGCC	CTCCCCCCTT	CCTTGCGAAG	AGGAGTATGC	CAAACGGTGA	7920
GAAAAACTTG	ACGGCGCGCG	CTAAACGCCT	AATAATTGCC	TCGCAGCCTT	TAGAAAAAGG	7980
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CGGCAGATCT	CGCGCATGCG	GCAGCGTTGG	CACTGGCCCT	CGCGTTGCTT	CCTCGGAGTT	8100
CTCTCCTGTG	GTACCTACTG	TTTGCCGTCT	GCTTTTTTAT	ACGGCTGAAC	CGTGGTCTGC	8160
TCTTGCTATC	GCTCGTGCTG	TTTGGTTTTG	TCGTTCTTTC	GTTCGATCCC	TGGCTCGACA	8220
GCCTCGGCAA	TTGGGCGCTG	TGTTTACCAC	GGCTGCAACC	CGTCTACCGC	GCCCTGATTG	8280
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GCGCAAGTGG ACCCGCGCAT TCTCCTTGAA CGCGAGGTGA AGGCGTTAAA AACTCCCACC 9360  
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CAGGATGTGC ATTTCACATT GGGTCTTGCG CGCGAGTTCG CCGCGGCGGT aAAGGCAGAC 9660  
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 TGTGCGCGCT CTTTCCCGTG CGTTGCGCA GCAGGTGGAC GCATTGCGCC GCGCGGTCAT 10500  
 TGCAGAAGGG GAGCGATTTC TTGCTCAGCA ACGCCGCGTG TACGCACAGG AAATTGCGCA 10560  
 GGTAACGCAG CTCGTTTCCC GTGCGGAGGA CGCAATTGCC CAGCTGGGGG TGTCTTCTCG 10620  
 CGTGATACAG CAGAAACGGG CTGAGGCGGA GCGCCTTCTG GAAGCTGCAG CGCGCAAGGC 10680  
 ACTGGGGGAG GTGACTAAGg TGCCGCAGAC GAGCTGCAGA ACAAGGCGCG AGATGCATTC 10740  
 CGCTCCTTTT TCTAGGGGAG TGGCGCCGCC CCTTTTCGGT GCGGCCTCAG GGTTGCGCTG 10800  
 AnGCCGGTGC GGGCGCTTTG 10820

## (2) INFORMATION FOR SEQ ID NO: 29:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13257 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

CAGGACGGTA nTCTCGTCTC TACGCTGACG AAGTTGCCAC TGATAGTGGA GATCGGTTTA 60  
 TCCAAATGGC GTTGGTAAAA CTCTTGCCCC AGAGGGCGnC AGGCGGACAG AGACTACAGG 120  
 AGATTGTGGC GCCGAGTCAG TCGGACATCG TGCTTATCAT GCTGCTAACC TGGCTTGAGC 180  
 GTGCACGGCT GGACCGGTTT AATGCTGATG CGCTGCTTAC GCGCAGTGG ACCTATGTGT 240  
 CGGCTGGACT GTATGGGGCG ACGGCGGGTA CCAATGTATT TGGTAAGCGC GTGCTGCCTG 300  
 CGCTGCGGTC CTGGCATTTC GATTTTGCCG GATTCTCAA ACTCGAAACC AAAAGCGGTG 360  
 ACCCCTACAC CCACCTGCTC ACCGGCCTGA ACGCCGGCGT CGAAGCACGC GTGTACATCC 420  
 CCCTCACCTA CATCCGTTC AGAAATAACG GAGGGTACGA ACTGAATGGA GCTGTGCCCC 480  
 CTGGGACtAT CAATATGCCA ATTTTGGGGA AGGCGTGGTG CAGCTATCGC ATCCCCCTCG 540  
 GTTCCCACGC CTGGCTTACA CCGCATACAT CCGTGCTCGG CACAACCAAT CGCTTTAACG 600

TTATTAACCC CGCGTACACC CTGTTGAATG AACGAGCGCT CCAGTACCAG GTGGGACTGA	660
CGTTCAGTCC CTTTCGAGAAG GTGGAGCTCA GCGCCAGTG GGAACAGGGG GTGCTTGCTG	720
ACGCTCCTTA CATGGGTATT GCCGAGAGTA TGTGGTCTGA GCGTTACTTT GGcACGTTTA	780
TCTGTGGGGT GAAGGTGGTT TGGTGAGGGG TTGTCGTGTG GGCCAGAGAA CGGGTACGGT	840
GGGGGTGCGC GTTTTCCCCG TGGGGgCTGT GCGCGCTCAG TTTACAGGCG AGGGATTGCA	900
GGGGTATGTG CGGGAAGCGT CTGGGTAAAG TGATGGTGCT CGGGTGTATG TTGCCGGGTG	960
TGGCGGCGCG TGTTCCTCTC TCCCCAAGC TCGGGGTGTA CGGGGACGCA CGCGGCGGTT	1020
CTGACCTGTG GGGCATCTGC ATACAAGCTC CCACAATGCC AGATACAGAG AACCAGGCGC	1080
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CATTGCTTGG CGTGCTAACG TGCACTGCCA AGGAGGTAGG CGCCATACAC GAAGAGTCGC	1440
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TTGGCGCGCA TTGGGGGATA GACGCGACGG CTACCGTTTC GTTTGGCATT GACACCAAGC	1560
TGGCTAAGTT CCGCATCCCC TATACGTGTC GCGTTGGCCC GGTCTTCCGC ACCTAGGGGA	1620
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CGTGCGGAGA ATGGTTTTCT GCTCCAGCTG ACGGTGGACG CGGCGCTCAC CCGCCTGATG	1980
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CATCCAGGCC CCCAATGAGG GTTCGGTGTG TTCGTTTCGAA CATGGAGGGT GGTACGTTCC	2160
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ACCGTCTGCG TGCGCAACAA AGACGCGTAC GGTTCGCTCG GTGAACAAGC CATTtCAAT	2520
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AGCTTCTGCG	CGTACTCAGG	CAGCTGCAAC	ACGCGCTGTG	CAATGcATAC	GCCACCGGkC	9360
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TTTTCCGACC	TGCATAATGG	TTACCCATGT	CCAGAGCCAA	CACCACCTTG	AAGTCCGAAA	9480
GAGGAGTGAG	CGTTATGCGC	GCGCCTGCAT	TCCACAGGAC	GTCATTCTGC	CTATAGTGCC	9540
TTTTCTGTTF	ATGGCTGACC	CTTTTATAGC	CTTTTCCCAG	TGTCGCGCTG	GCTGCCACTT	9600
CTGCCCCGTAC	TAACCTCGCGT	TTCCACGGCG	CATAGCTGAG	CGTCGCGTCT	GCCCCGAAAC	9660
CATACTTGCT	ATGCAGAGCC	TCTTCCGCCG	CACCTCCAGG	GGGAGCAGGA	GCAGGGGCAG	9720
GCGCGTCCCA	GGAACCATT	GAGGCAAAGG	AAAGAAAGCA	AATATCCAAG	CTCACTCCAC	9780
TTGAGCCTAC	GTTCTGTGCA	CGGTAGCCGA	GCCTGCCGCC	GATGCCATCG	AACCCTGGCG	9840
CAAACCGCAC	CTCCTCTTCC	TTGTAGAGGT	CTGCAAGAAA	AGGTTTCCAC	AGTTGGGCAA	9900
AATTGGCGCG	AAAGAGGGGA	GCGGTGCCGA	TCGTCAATATA	CGCACCAAAG	CAGTGTAGCG	9960
TCGCTTCAAT	AGCGGTTTCT	TCTGTGACTA	GGGTAAAAGG	CTCACCAGGC	TTTTTGGTCT	10020
GAAAATTTAC	CTCCAAATCC	TTGATAGAAA	TTTCAGTCCA	CAAGCCACCG	TCAGATAATG	10080
TACCTGCGCG	CCTTATGCGG	TCACTTTT	AAAACAACGG	AACAGtTAaC	ACAAGTGTGT	10140
GGTACTGCGG	AACCCGTGCG	TTATCTGACG	AATGCGCGCT	TTTTCCTTCT	CACTCTCTTC	10200
TACTTCCTGT	CCCTGCGCTC	CATTTCCTCG	TATCTGTACG	TTCACCACAT	CTCTGTGCTC	10260
GCCATCTCCA	TTCTCGCGGG	GCGGCACGGG	AGGCGGCGGA	CCTACTGCGG	GGTCGTAGGG	10320
GAGCGTGATA	CCCCACTGCA	ACCrGGCAAA	GCCTGAAAtC	CGCGGCGTAC	TTGCTAAGGT	10380
GTGCAGTCTG	GTTTCTGCAC	ACAGTCCTGC	TGCGGACGAC	ATAAAGAGGA	GCGCCACGT	10440
GCCAACTGAC	CTGACACGCC	TCCCTGCTGA	GTGTCCAGGG	GGATCATGGC	AGGAGGAGCG	10500
CACAGCCGCC	GACGGAGACA	GCAGCGTGCG	TCGCCGCCGG	ATTTTGCTTT	GAGAGTACAA	10560
CACCyTGCAG	GCATAAAGAC	AGGGACAGCG	TACTCCTTTC	ATGGCTCCAT	CCTAAAAGTC	10620
CGCAGTGC GC	GGCGTACGAG	GAAACGGAAT	AACATCCCGA	ATATTCCCAA	GCCCGGTGAC	10680
GTA CTGCAGC	AAGCGCTCGA	AGCCGAGTCC	AAAACCTGCA	TGGGGCGCGG	TACCAAAGCG	10740
ACGGAGATCG	GTGTACCAGC	GATAGTCGTG	AGGGTCAAAA	CCGCTGGCAC	GGATGCGAGC	10800
ACAGAGTACT	TCAAAC TGTT	CCTCGCGCTC	CGAGCCTCCC	ATAATCTCCC	CTAATCCCGG	10860
AACTAGCAGG	TCCATGGAAC	GCACCGTTGT	GCCGTcGGCA	TTGAGCTTCA	TGTAGAAGGC	10920
CTTGATTTC	TTTGGGTAGT	CATAGACAAT	CACCGGGCCG	TGGAACACCT	CTTCTGT TAA	10980
AAAACACTCG	TGCTCGCTTT	GTAAATCGCA	TCCCCAGCGT	ACGGGGAACT	CAAAGGAGCG	11040



CCCACTGTTC	TCCAGTAGTT	TAATTGCCTC	TGTGTATGTC	AGGCGCGTGG	CAGGCGCGCG	11100
GGCGACGTCT	TCGAGCATGC	GCGTCAGCTG	CCCTGGCGTC	CGCACTGGCG	GTGTGCGCGC	11160
TGTGcTGCgC	GCGGcAAGGG	GTGTGTGCGC	ccsCGCGCTt	CcGCATGgCT	GyGCgCGCtc	11220
GTCAAGGAAG	GCTATATCcT	GCGCGCAGTC	CTTGAGTGct	GCGCGTAGCA	GGTACGCCAA	11280
AAACTCCTCT	GCCACGTCCA	TGCAGTCAGT	GATGCGTGCA	AAGGCGATTT	CCGGCTCCAC	11340
CATCCAGAAC	TCAGAAAGAT	GGCGGCTAGT	ATTTGAGTTC	TCTGCGCGAA	AAGTAGGGCC	11400
GAAGgTGTAG	ATGCGCGTGA	GGGCAAGCGC	ATATGC'TTCC	CCCTGCAGTT	GGCCCCGAAAC	11460
GGTTAGGCGC	GCTGCCTTAC	CAAAAAAGTC	GTCCGCGTAC	GTGAGTGCGT	AGGGGTGACC	11520
TGCCGCGCCC	GCTGCGTGTG	cTTCGCGCGC	AATACGCACG	GGATCAAAAG	TAGTGACGCG	11580
AAAGAGCTCG	CCTGCACCCT	CGCAGTCCGA	AGCGGTAATG	ATCGGTGTGT	GCACGTACTG	11640
AAAgTGTGCG	TCGGAGAAAA	AGCGGTGGAC	AGCGCCTGCA	AgTGCACTGC	GCACCCGTGC	11700
ACACGCGGCA	AAGGTACTAG	TGCGCGCGCG	CAGATGGGCG	TGCGCACGCA	AAAAC TCAA	11760
ACTATGCGAT	TTCTTCTGCA	AAGGATAGGT	TTCAGCAGGC	GCCTCGCCAA	GAACAGTCAG	11820
GTTGCAAGCG	CGCAACTCAA	GCGCTTGCCC	GGCGCCTGGG	GAGGGGACGA	GTGCACCCCTC	11880
GGCGCGAATG	CAGGCGCCCG	TAGTAACGCG	TTTGAGCGTT	TGAGCGAGCG	TTTCCCCCTG	11940
GAGGACAGCG	TCGCGGACAT	TAGGGATTG	CTCAGTTGCG	CCCCAGAGGA	AAGGGAGGCG	12000
GAACACTCGG	GcAGGGGAAC	GGTAACCTGA	AGGGTATCAG	GGCAAGAACC	GTCGCTCAGA	12060
CTGATAAAGA	CAGCGCGTTT	TGTC'TCCCGT	TTGGAGCGCA	CCCAACCGTG	AACGCATTCTG	12120
TGCTGGCCCTG	AGGGGGGATG	AGTCAGAATC	TCCTTGAGCA	AAGGGTGCA	AGCACGCACT	12180
CTAACGCTTT	TACCTCTTT	GTGGAAGGGC	GTGGACCGGC	AAGCAGCTGT	GACGCCACGG	12240
CGCACGCCCT	GCGCGGCATC	TGCATGGAAC	GCCGCGCAGG	mCTGGGGAGA	GCGAACCGTG	12300
CGAAAAAGCG	TCGTTTCATT	TCCAGGGAAC	TTACTCTCTA	GATGAGGAGC	GGCCGAGGCG	12360
CGGTCTTCTG	TGACCGGGAC	CACGCCGTAC	GACATAGAAA	ACCAGATGCA	AGTAGAGTAT	12420
CAGAAACACT	CCCGCAGAAA	GGACGCGCGG	GTGAACGATT	ACCGCGCCTA	TAAGACTCCA	12480
CAGGTGCACC	CTTTCCATGG	CGGATCCCTC	GGCATGTGTG	TTTCGTTTCCT	TAAGGATACC	12540
TGGGCACAAA	CCCTTGACGT	GGTGCGCAAA	ATGCTCGACC	ATGTGCCCCG	GCGTGCCGTG	12600
CGGCAGTGTC	TCGTCCCCGT	GTGCATTTTG	TACCATAAGT	TTCAAGGAGGA	AATGTCCTAT	12660
GCAGCAGCGC	TTCTTCTTAC	TCGGTGTCTG	CGCTTTTGCT	TTTGGCGTCC	CGGTTTTTCC	12720
CCAGCAGGGC	ACAGATCCAA	GTGTGGGTGC	TCAGGCCAGT	GCGGGCGACG	GAGGCATGAT	12780

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gAGCaGGGGG CATGATTCAA AGGTGCTCGC GCTCCAGTAT ATCCAGGAGG CACTTGAAGG 12900  
CGGACGTGGT TCTGATGACC TCCAGGAGGC GCTAAGTCGG TTGGCCACTG CTGGATTGTT 12960  
CCGCGTGATC CGTGAGCAAG GCGGTGTGAT TAATGATTTC CCCGACATCC GCCTGCGTGC 13020  
TTGCGAGCTA CTCGCCCCGT TTCTTCGGCT CGTACCAAGG ACGCTCTCAT CCAAGTCATG 13080  
TGTGCTGACC GTGAGCTTCG GTGGTGAGGG CGGCGGTTAA GTCGTTAGGA GAGGTGGGTA 13140  
TCAACGAGCA GGACGAGACA ACCGCCACTA TTGGCTGGAT TAGTCGGAAG TTTTCCGCTA 13200  
TTAACCCGac AGGTTCTCTC GCGCTTGAGA TTTTGAACAC GTACGAGCGC CTTGCTC 13257

## (2) INFORMATION FOR SEQ ID NO: 30:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14512 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

AGTTTCCCGA GTGGTCAAAG GGAGCAGACT GTAAATCTGT TGGCGTTGTC TTCCAAGGTT 60  
CGAATCCTTG ACTCCCCACT TTCGTCTTCC GTTTGCTTTT GGGTAGTGTC TGAATTGTCT 120  
TTCCCTGGCG TTTCTGTCCA GCGGTTTTTG CTAGCTGCTG TGCCTCTTGT CACTTTCTTG 180  
AGTGCAGGAT GTTCTTTTCG TGCCTGTGCG CGCGGTTGCG GAAGGATTTT AGTGGCGGAG 240  
GAGGGGACGT GCGTGTGCAC TTCTGGGGGG TCGGGGGGTC TGTGCCTACT CCTGTGACAC 300  
CTCGACAGGT CcAGTCAAAG ATAGCgGCTG TCGTTCaGCG CATAAGTGCa AAGGATGTCA 360  
GGAATCAGAG ATCCAAGGAG CGTTTTATTT CTGATCTGCC TGCCTGGCTC TTTGGGACTA 420  
CGGGTGGGAA TACTACGTGC GTGGAGATGG AGACTGATTG CGGGGAAACC CTCATCTTTG 480  
ACGCAGGGAC AGGCATTTCGT GATCTGGGTA TCGATCTTAT GAGCCGTCCA GGCTACAGGG 540  
CGCAGGGGCA TGTATACCAC CTCCTGTTTA CGCATTTTCA TTGGGATCAC ATCCAGGGGC 600  
TACCCTTTTT CAATCCTGCC TTTGATCCTC GTAATACCAT TATCGTCTAT AGCACTCGCA 660  
AGAAAATGAA GGAATTCCTT GAAGATCAGA TGAGGTATCC TTACTTTCCA ATATCTATGT 720  
TTGGACGCGA CGGTTTTAAC GCAAAGTTTG AATTTGCGCT GATAGGTAAC CATGAGGAGT 780  
GCTTTGCTAT TGGGAAGACG AAGATAACTT GGAACCGGGT GCGTCATCCA GGCGGATGTG 840  
TATCGTATGC GGTGAGCGAG GCTGGTGGA AGAAGGTGAT TTTTCTACC GACACCGAGT 900

TACGGCAGAA GGATTTTGAT AGAAGTGAGC GTAATGTCTG CTTTTACGAT GCCGCAAGTC 960  
TGCTCATAAT TGATTCGCAG TACACCATGA CTGAATCCAT CAAAAAAGAA GGGTGGGGCC 1020  
ACTCCACGTT CTCTATAGTG GTTGATTTTG CAGTAAGTTG GGGGGTGAGA AGACTGGCGC 1080  
TGTTCCACCA TGAACCTACG TATGATGATA AAAAGTTGTT TAGCATTTTG CAGAATGCCT 1140  
GCTGGTATCG CAAGTACGTT GGTGCGCACG ATCTTGAAAT ACTGCTCGCA CAGGAAGGAA 1200  
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AAAATGCTG CACTGTTGCA AGACGCTACA GTGGTAAGTG CAGCGCGGTT TGTGGAAGCT 1860  
TGCACGAGCG CTGCATTGCG AACGCGCTAT AAGATCCCTG CTCCTTCAGT GGAGGGTTTT 1920  
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CCCCCAGCTC CTATCTCAA TCCTGGGCTC ACCGCGTTGA ATGCTGCGCT GCATCCTGAA 2340  
GTGCATGACT TTTTCTATTT TAGGCTCACC GATCCGCAGc GGGcACGCAC ACGTTCACCA 2400  
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ATCAGCGCAT	TGCAGAGACG	TTCCATCACG	TACTTATGCA	CACCGCGCAA	GGamGCGTGC	2880
GCGCGCGTAC	CTAGCCTCGC	GCAaGGTAAC	GGATGATTCA	LACGCACtTT	AAGCTCGGGT	2940
aCGTCCGCCG	GATCCGGTAT	GGTTGTTTCA	ATTTTTAAGG	CACAAGGGAT	ACTCCCCCGA	3000
GTTTCTGGCC	CGTTCTGGGT	TGTTTGCAAA	AAAAAGCGAG	CGTATCGCCG	TTTTTTCAGA	3060
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TGAGCACTTG	TTTgCtTTCA	CTGTGCTCTT	TCTCAGATGA	GAAAGACGCG	CGCGGCGATT	3240
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CGAATATATA	TGTGTTTTGA	TGCCGACGGA	GCAGGCAGAG	CGGCAACGTA	CAAGGCGATT	3420
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CCTGCAGAA	TGCGTGTAT	AGAAGGAGAG	GACGCTTTGA	GAAAAAGCGT	AGAACGGAGC	3540
ACTAcTGACG	CGCAgTATTT	GATACGGTGT	GCACGCCATG	AGCACAGTCA	CCTTGGTGCA	3600
GATGACACAT	CACGTGCGGT	GTCCTTTTTA	TTCCCTTATC	TGAGTGTCTT	GGA CTCTGCC	3660
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CGGGAGAGTG	TGTGTGCAGA	TGACTTTGAA	GATCCTATGG	CAAAAGAGTT	ATTCATAATC	3960
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GCGCCGCAGA	TTGTGCGTGA	CGGTGTTGCG	CTCGTGCGTC	GTAATAGACT	GCTGAAGGAG	4140
CGAGAATCGC	TCGTAGGgCG	GCTGCGCCGA	TTTGGGGATG	CATCTTCGGG	TGAGGAGTGC	4200
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CGTTGTAAAG	AAAGTTTTAT	TGAAAAGAAT	GTCGAATACG	AATCTGTGCG	CGAAGAAGTT	6300
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GATACCATCG GGAAAACAAA GGATGTTTGT CTTGAGCTAA AGTGcAGGAA TAGGCTTGcT	8040
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TCTGTTGAAG TACGTGAGGC GCTCAAAGAG CCTATCACGC AGATAGTGA AGAAATTAAG	9060
CGGACGCTTG CTCGAACGCC TCCTGAGTTG GCTGCGGATA TCGTCGAACG GGGCATCGTC	9120
ATGACAGGCG GAGGCTCTCT CCTCAAAGGT CTCCCTAAAC TTATTTCTAA GGAAACGCAT	9180
GTGCCGGTTA TCCTTGACAGA GAATCCCATG AACTGTGTTG CTATCGGCKC AGGAAGGTAC	9240
CACGAAGTCT ACAAGGATAT TTCAGGGGAT CGTAGTCTGT ATGCGGGACT GAATTCATGA	9300
tTAGGTGGAA AAGGCTTTTT TTTTaGAAT AGACTCTGAT CTATTCACCT TTATCGTGT	9360
TTTGCTTGT TCCTCAGgTC TCTTGGTcT CTCAGGAGGG GAGCTGATTG TAAGCTTTAG	9420
GGATGTGGGG TTCTCCGTTA CCTCCCGCGT GGAGAAGGCT GCAGCTTCGG TTTCTTTTTT	9480
TGTTACTCAT ACGGTCAAGA CGTTGAAAAC CCTCTCAGAG GTGCAAAGGC GGTACGAGGT	9540
CTTGCGCGAA CAACTGAAAG ACTACGAATT CTTGCAAGGA TCACGCGAAA GTTTGAGAAA	9600

GGAAAATCaA AGGcTACGCG CCATGCTTGG GTTTTCCCGC GAGCTTTCAA CGCGCAACAT 9660  
TCCTGCAGAG ATTATAGGTT TTGACCCCGA CAATTTGTAC TCCGGTATTG TTGTTAGCAG 9720  
GGGTGCGCGG CACGGGGTGC GCAAGAATAT GCCTGTTGTT GCATTTCAAA GTGACACATT 9780  
GGGGTTGGTT GGAAAAGTGG TGCAGGTTTC GCGTACCACG AGTATGATAG TGCCGCTTTA 9840  
TCACTACCAA TTCTATGTTG CCGGAAAAC TTAGCGTGCT CAGTATCGGG GATTGATTAG 9900  
TGGACAGGGG GGTAGTGA CTCCCTTCT AATGCGTTAT GTGAAGAAGC ACGGACAGGG 9960  
AAGTATTCGT GTCGGCGACC TCGTGGAAC TTCGGGGGAA AATTATCCTT TCCCGAAAGA 10020  
TGTACCCGTC GGAAGGTGC GGGACATTAA ACTCCACGAC CATGAAACTT CTCTGAACT 10080  
TTCTCTTGAC CCCGTTTAG ACCTTTTCCG TTTGGAATAC GTTTTATCC TCGACCTGTC 10140  
CTTGTCCTCA GAAGGACCGC ACGGATGATA CGGCTCATCG CCTGGTCTGT AGGTACCTCT 10200  
TTTCTTTTGA GCATGTAGA GATGGCAGTG TTCGTACACG TTTCGTA CTCTGAACT 10260  
CCAGATCTCG TCTTGCTCGT AGTACTGTTT ACGAGCATTC ACAATGGCGT GGTGGCAGGG 10320  
ATATGGACTG GATTATtGC AGGAATTATT TTTGACTTCC TTTCTATCTC TCCCTTTGGT 10380  
TTGCATTCGT TCGTTTTCAC CACTATAGGC TTTATGGTAG GAAAGGTGCA GGGaAGATAT 10440  
CATATCGaTA GAGTATTCGC CCCCGCGGTA CTGGCAGGCT TTGCAATGAT TTTCAAGGTG 10500  
GGATTGGTGT TGGTATTGCG AGGAGTGTTT GGTCCAAATA TCCAAGTGTA TAGCGTGTTT 10560  
TCACGcAGCT TTGGATAGAA ATGACGTTGA ATATTGTGTT TGTCCCTTT GTATTGCGGC 10620  
TTTTGAATAT GTTCCGACC ACTTTTCTTT ATAAGAGGTT TTCTTCGTAG ATGCGTTATT 10680  
TTTCTCTCCT TCCTGATCGT CATATGCTTT TTAGGATAAA GGTTCTCACC TGGCTCGTCG 10740  
TGcTGTTAT GCTGTGTAC ATGCGGCAGC TGTTTGTCAT TCAAATCGTG CGGGGGGATT 10800  
CGTTCAAAAA AAAATCGCTG AACATATCTC AGCGTAgtAA AGTAATTCCT GCACAACGGG 10860  
GGGAGATTTT TGATCGCCAC GCGGaTCTGC CCATGGTGCT GAATGTCAAT TCGTTTGACG 10920  
TTGATATGAT CCCCGGAGAG GTTCCGCCTG AGCAGTTCGA TACGGTGCTC AACAAATTGT 10980  
CGCATATTCT GCGCGTACCT ATTTCCGATA TTCGAAAGAA AATTCCTGAT GCGGTCCGCC 11040  
GTTCAATTCA AACGGTGGAG TTGCGCAGTA ACGTGAGTTA CGAGGACATC ACTGcTATCG 11100  
CCCAAATAAT TGATGAACTG CCGGGCGTTT CTTGGTATTC AAAACCAGTA CGAAATTACG 11160  
TTGAAACAGG ATCATTCGCT CACGTTATCG GATATGTGGG GGAGATTACA AAAGAAGAGC 11220  
TCAAACGATT TTACAGTAAA GGTACAGGC CCAACAGTCT CATTGGAAAG GCTGGAATTG 11280  
AAAAAGAATA CGACGAGGTC CTGAGAGGGA AAGAGGGACA CGAGTACCGG ACCGTCGATG 11340



CCCGTGGGCG	ATACATAGAA	AACACTTCGG	TTACTAACCC	TCCTCGCATG	GGTAATAACC	11400
TCGTGCTCAC	CATCGATCGG	CGTATACAAA	AACTTGCAGA	AGACGCGCTC	GGTCCTCGTA	11460
TCGGAGCGGC	AGTGGTACTG	AAACCGACAA	CGGGAGAAGT	ACTTGCTATG	GTATCTTATC	11520
CGTACTTTGA	CCAAAACATT	TTCCTCAGC	ATAACGCCCA	CGAACTGTAT	GCGCAGyTTT	11580
CACATGATAC	ACGGTTCCCT	CTGCTTAACC	GTGTTGTGAA	TGCAAGTTAC	CCGCCTGCGT	11640
CGACGTTCAA	GATkGTCaTG	TCAACCGCTA	TTTTGGCAGA	GAAGGCATTC	CCCCATGAAA	11700
AGACGGTGGG	CTGTCCAGGA	GAGATCGAGT	ATGGCAATCG	CTTATTTTCG	TGTCATATCA	11760
GAAAGCCTGG	GCACGGCAAG	GTAGATCTCC	GTCGTGCGCT	TGAGCAGTCG	TGTGATATTT	11820
ATTACTGGAC	AGTCTGTCTG	GACTATCTTG	GCATCGACCG	CATGATTTTC	TACATCAACG	11880
ATTTTGGATT	TGGCAAATCG	GCGCGCATCG	ATTTACCCAG	TCAAACAGAG	GgTATGGTTC	11940
CAACACCGAA	ATGGAAGAA	CGTCGGTTTC	ATGAAAAATG	GTTGGATGGA	GACACTATGA	12000
ATCTCGCTAT	CGGGCAGGGT	TACATGCTTG	TCTCGCCTCT	GcAGGTGGCA	AACATGGTTC	12060
CGATGACCGT	TAACAATGGC	GTCATTTATC	GGCCCCATTT	ACTCAAGGAA	ATTCGGGACT	12120
CTCGTACTAA	CGAATGCTAT	TTAGGCATAA	ACCTGAGGTA	TTAAAGACAG	CAAAAATTCC	12180
TGCAGAGATA	TTGAGCACG	TGCGCGCAGA	TATGCATTTC	GTTGTCACGC	GTGGCTCCTC	12240
CCAGTATGCA	ATGAAAAATA	AGACCGTGTC	CCTGGCAGGG	AAAACCTGGTA	CTGCAGAAGT	12300
AGGTTTTTAC	AATCGGTGGC	ATTCGTGGAT	GGCAGCGTAT	GGGCCTTATC	ATCGCCCCCC	12360
GGATGAAGCG	GTGGTCGTTG	TGGTACTGGT	AGAGGCAAGA	AACGAATGGG	AATGGTGGGC	12420
GCCGTTTGCA	ACCAATATCA	TTTTtCAGGG	TATTTTTGCG	AATGAGGATT	ATGAGCAAGC	12480
AGTTGAGTCG	CTCAAGTCGT	ACGGCATTTTC	CCTTGGGGTG	CCGGCAAGGA	GTCGGCAGGA	12540
ATGAGGATTC	GCGGTGTCAG	TGATTTtGAC	TACCTATTGC	TTCTGACCAT	GctGGCGTTG	12600
ACCArCATTG	GTATCTTGTT	CATCTATTCT	TCCGGGGTAA	ATTCAGAGGG	ACACGTTATT	12660
TCCAGAGAAT	ACCTAAAACA	AATAGTGTTG	GCCGTCATGG	GTGTGGTGCT	CATGCTTTCT	12720
GTGAGCATGT	ACGACTACCA	CAGGTTCAAG	GATAGAACAA	CGCTTATTTT	TGCAGGTTTT	12780
ATATTGCTGC	TGATATACAC	GCGGTTGTTT	GGGCGGTATG	TAAATGGTGC	AAAAAGCTGG	12840
ATCGGTGTGG	GAGAATTCGG	CATTCAGATT	TCTGAGTTTG	CAAAGATCGC	GTACATATTA	12900
TACTTAGCGC	ACTATCTTGT	TTATTCTCAG	AGTGAGCCTA	TGCTTAAGCG	CTTTGCGAAA	12960
GCGGGGGTGA	TTACCTTGCT	GCCCATGGCG	CTCATATTGT	CTCAGCCGGA	TCTCGGCACT	13020
GCATCCGTGT	ACCTGCCGAT	TTTTCTCGTT	ATGTGTTTTA	TTGCAGGATT	TCCTCTCCGT	13080

TTGATTTTCG CGGTGGTTTG TGTGGTCCTC CTGACTTTGC TCTTTACACT GTTGCCCCTT 13140  
TGGGAGCAAA CCTTTTTGCA ATACCAGGGG GTGGCTACGC GCATTGCAGA TTCGCGTATG 13200  
CTGTCGCTGT TTGTGTTTTT TTCTCTCAGC GCTACGCTCG CGGTAgcGGT GGTAGGGTAC 13260  
CTGCTCTCTG GAAGAAAATA CTA CTACTACTGG ATTACTTACG CTTTGGAAT GGTGAGTATT 13320  
TCTTATGGCG CATCGCTGCT GGGAGTTCGG GTTTTAAAC CGTATCAGAT GATGCGCCTG 13380  
ATCATTTTTC TCAATCCCGA GGTAGATCCA CTCAAAGCGG GATGGCACAT TATCCAGTCA 13440  
ATGATCGCTA TTGGCAGTGG CGGTGCGTTT GGAATGGGGT ACTTGAGAGG ACCGCAGAGC 13500  
CATTATCGAT TTTTACCGCA GCAGAGTACT GATTTTATCT TCAGCATTCT TTCTGAAGAG 13560  
TGGGGTTTTG TTGGCGGGGT GATAGTGT TT GGT TTGTATC TGTGTTCTT TCTGCATACG 13620  
CTTTCCATCA TGAGTCACGT TGATGATTG TACGGTAAGC TCATCGCAAG CGGTGTGTTG 13680  
GGTATGTTCC TTTTTCAC TT TGTAGTTAAC GTGGGCATGA CCATGGGAAT CATGCCCAT 13740  
ACGGGTATTC CTCTGTTGCT CCTTTCGTAT GGTGGATCGT CTCTGTGGAC CGCGATGATT 13800  
GCAACGGGAC TCTTGATGAG TATCAATGCA AGGCAGTTGT AAATAGAGTA AGGAAAGGAC 13860  
ATTTGGTATG AAGGTGGTTC TCTTTTATGA TCAAGGAAGA GCGCATTCAG TTGCTGCGAT 13920  
ATGCGAGGTG CTTTGTGCAC AAGGATGCGC GGTAACACCG CATGCGATTG AGCAGGTGTG 13980  
GAACGACACA TCACCGTGCA GTaCgcCTTT GGCnTTGGTA CAGGATGCAA CGCATGTGTT 14040  
TTTTTTGTaC gcGCATGAGC CCATGCGCGA TcCGGCTTTT ATTTTCTTTT CTGGAGTTGC 14100  
TTGTGGGCGT GGTATGCACG TGCTGCTCTT GGCTACAACA ACGGAGGTCA GGGATATCCA 14160  
TGTATTTTCG GACTTGGTCT TTTTACTTGA GGAGGAGACG TTTGAGGATT TCTTTCGTGT 14220  
CGAGCACGAG AGATTTGTAA GGCAGAAAAA GAAGCGTGTC GCACGCACTG CGCTGTTAGA 14280  
GCGCGGTTAT CCATGTTTTG AAGAAAATTT CATCGCGACA GTCATGGATG GGAATATTGA 14340  
TATTGTCAAT CTCTTTTGG ATGCAGGATT TAGCGCTGCG TTGAAAGACG CACGCGGTAC 14400  
gCCTGTGTTG TCTTTGGCAG TGCGGGAGGG TCAGGATGAG ATGGCAGCGC AACTTnATTG 14460  
nCGGCGGTGC GCCAGTAGAT CCAGTTAATG GGATCCTCTA AGTAGTTAAT TA 14512

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3569 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

CCGCCGCCCG CGTATTTCTC GCATTTCTCG TGGGTTATGC CCGAGAGAGT AGTACAGGAA	60
CATATATCGT GCGGTTATAA GGCTCTCAAG CAGGATCATA TGGAAGTAGA CTGTGATGTC	120
TATGCTTACC GTGGAGGGCG GGTGTTTCCC CGTGTGTCCG GTATGGGGGT TATCGATCAT	180
ACAAACATCC CACATGCTCT GCGTATTTT TGTGAAAAGA TGA CTGATTC TTTTATGAAA	240
AAAAAATAG ATCCACACCT GTGCCAGAGA GAGAGAAAGT TTTTACCCCA TTA CTTTTC	300
TTTCGAATGG GTAAGCTGCC GCGTATTTGC GCAGTTGTGT TTGCTCAACC GAATGTTATG	360
CAGGGTAACT TTCTTACCGT TCATTTTAAA TTAAATGTAG AAAACGAGGA TTCTCGTATC	420
ATAGAAGTCA CGGTGGCGAA AGAGCAGGAG AATTGGAAAC TATTCCAATT TTTATTTAAA	480
GAGGATCGCG CGCATCTTGC TGTCTTGTA GTGATGTCTG AGTCTGTAAA GGAGATGGCC	540
GGAGGATGAA AGGTCAAGAT GTCATCCTGT GCGACGGGGG ACGTCATTTT TCATATAAGG	600
TACTTCCTCG TGTGGTCATT GTGGGAAGAC CGAATGTAGG TAAGTCGACA TTATTCAACC	660
GCCTGCTCGG TAGACGGCGC TCTATCACCA GCAATACGTC AGGGGTTACA AGAGATTCTGA	720
TTGAAGAAAC CGTGATTCTG CGAGGGTTTC CTCTTAGACT TGTTGACACG AGCGGTTTTA	780
CCGTTTTTTC TGAAAAAAG GCATCGAGAC AACATATCGA TACTCTCGTG TTAGAACAAA	840
CGTATAAATC AATACAGTGT GCGGACAAAA TCCTTCTTGT GCTTGATGGA ACGTGTGAAA	900
GTGCAGAAGA CGAGGAGGTT ATCCAGTATC TGAGGCCCTA CTGGGGCAA CTCATCGCTG	960
CGGTTAATAA GACGGAGGGA GGAGAGGAGG TGCATTATAA TTATGCACGG TACGTTTTT	1020
CTACCTTAT CTGTGTCAGC GCCGAGCAG GTAGGAACAT AGACGCGTTG GAAAGGGCGA	1080
TTATCCAAAA TCTGTTTTCT GTCGATGAGC GCCGGGA ACT GCCGAAAGAT GATGTTGTTT	1140
GTCTTGCAAT AGTGGGTAAG CCGAACACAG GAAAATCCAC TTTGATGAAT TATCTCATGC	1200
GCCTACCGTT TCTCTGGTGT GTGATAGAGC AGGTACTACC AGAGACGTGG TAACCGGTCA	1260
TGTTGAGTTC AAACAGTACA AATTCATTAT CGCAGATACG GCGGGTATCA GAAAAAGACA	1320
GAAGGTATAT GAGAGTATAG AGTACTACTC GGTAATACGA GCAATTAGCA TCCTGAATGC	1380
CGTTGACATT GTATTGTACA TCGTCGATGC CCGAGATGGA TTTTCTGAAC AAGACAAGAA	1440
GATTGTTTCG CAAATCTCAA AGAGAAATTT AGGTGTGATC TTCTTTTGA ACAAGTGGGA	1500
TTTGTGGAA GGAAGTACCT CTCTAATAGC TAAGAAAAAG CGTGATGTAC GGA CTGCTT	1560
TGGGAAAATG AATTTGTTC CCGTGGTACC TGTATCAGCT AAAACGGGGC ACGGTATTTT	1620
TGATGCATTA CATGTGTAT GTAAGATCTT TGCACAATA AATACAAAAG TGGAGACTTC	1680

CGCTCTCAAT ACTGGCATTG AAAGATTGGG TAACGTCGTA TCCTCCTCCA AGAAAGTATG	1740
GACACGTTTC GTTAAAGTAC CTGGtGCAGG TATCGGTTAG ACCTATTGAA TTTTtGCTTT	1800
TTGCAAATAG GCCAGATCGT ATACCGGAAA ACTACGTTTCG ATTTTtTACAG AATCGTATTC	1860
GTGAAGACCT AGGATTAGAC TCTATCCCTG TGAAGCTAAC CATACGGAAA AACTGTTCGGA	1920
AGCGATAGAT GCAAGATGAA GGAGTGGATA TGAAAAAACT TCTTTTACGT TCTTCTGATG	1980
AAGTTCGAGT AATCGCGCCC TCGTGcTCAA TGCCTAAGAT TGATTTCATCG GTAATTGAGC	2040
GTGCACAGGA GCGCTTTTCGA TGTTTGGGTC TCAATGTtTGC TTTgGAGATC ACGTGTACGA	2100
CGAGGaTTTT TTAGtTCTGC ATCTGTTGAT AAAAGAGTTG CGGATCTCCA TGCTGCCTTT	2160
GCAGATAAAA AAGTAAAGTT AATcTCACTG CAATTGGAGG ATTTAATTCT AATCAACTAT	2220
TGCAGCACAT AGACTATGCT CTTTTGAAAA AGAATCCLAA GTTGTTGTGT GGTTTTTCTG	2280
ATGTCACCTGC GCTATTAAAT GCAATTCATG CGAAGACAGG AATGCCAGTT TTTTATGGTC	2340
CACATTTTTTC GACATTCGGT ATGGAAAAAG GTATTGAGTT TACTATTGAA TGCTTTAAGA	2400
ACACTTTTTTT TTATGGTCGG TCGGATATCT TAGCATCCGA AACATGGAGT GATGATATGT	2460
GGTTTAAGGA TCAGGAACAT CGCCAGTTTA TTACTAATCC TGGGTATGAA ATTATCCATA	2520
GAGGAGATAT GGTCGGGATG GGGGTCGGAG GAAATATTAG TACATTTAAT CTTTTAGCAG	2580
GTACGGAATA TGAACCGTCT CTGAAAAAGA GTATTTTGTT TATAGAGGAT ACGTCTCGTA	2640
TGTCAATTAC AGATTTTGAT CGCCACTTAG AAGCACTTAC ACAACGGGAT GATTTTTGTA	2700
CGGTGCGTGG CATtCTCATT GGCAGATTTT AAAAGGATTC AGGTATTGAT ATGGACATGT	2760
TGCGAAAAAT CATTTTCGAGA AAAAAGGCTC TTGATGCTAT TCCTCTATTT GCAAATGTAG	2820
ATTTCGGGCA TACGACCCCC CATTGCATAT TACCTATTGG GGGAATGATT CGAGTTAATG	2880
TTGATAGAAA ATGTATTACT GTTCAGTTGC ATTCTCAGT TGAGCAACTC CCAGAGTAAT	2940
TTCGGTGAAT GATGTtCTTG CGTTACCATT ACGTATGCTC GCACACTGCC TGAAATGCTC	3000
ATTGGAGAAA TAAAAGAGCC AGTTTCTGTA CTGAAGGGAA CAGGGAAAGT TGTTCTTGCG	3060
CAGTTGGAAA GGCTAAACAT TAGCACTATT GGAGATATCC TTTCGTACTG GCCTCGTTtG	3120
TGGGwwgrkA GAACGCAAGA ACAGATGTTT TCCCAATGGA cgCTGGCGCA TAGATTGCAA	3180
GTACGAGTTA GTGTCACTGC ACATTGCTGG TTTGGATTtG GCAAGAGCAA GACTCTCAAG	3240
CTTGtGGTAC AGGATGGCCA AGGATGCGTC GCTGAATTGT TATGTTTTTCG CCGTAATTTT	3300
TTGCATTTTA TGTTTCTCTG TGGAAGTGAA GCAGTCGTGT ATGGAAGTTT TTATGAAAAG	3360
GATGGGTtGC TGGAAAGTAG TTCATTTGAT ATCGAAAAAA TCGATTGTAT TGAAAAAAAG	3420

ATTTTGCCTG TCTATCCCTT AACCAAAGGG TTAACAACAA TGAAATTAAG AATGCTCATT 3480  
TGTGCAGCAA TGGATCAATG GATTGGCAGG GTTGATTCTG AATTGCCCAA ACCTATTCTT 3540  
GAGAAATATC ATCTACTCAC AAAACGAGA 3569

## (2) INFORMATION FOR SEQ ID NO: 32:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3858 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

TGCTGAATTC TTCCGCGCGT AATCCTGTCTG CCCATGCTGC CTCTCGCGTT ATTGAGGCTC 60  
CGGTAAGTGA GGGAGCGAAG AGTTTGTCTG GTGAGCGTGT CCTTGGTGTG CGCGTGTGTG 120  
TCCCCACGTG GGACAGTAAC GCAAACGCAA TGATAAAGCC GGCCTTCGTA ATTCTGCGT 180  
ACGAGGTGAT GGCTCAGGTG GACGATCAGG GTAATGTACA GGCCCCACA GAGGAGGAGA 240  
AGGCTTCTGG AAAGGGGCGT TTTGAAGATG GGTACGGAGT GGTAAAGAAT GTGGGTGTTC 300  
TTAAGTCCAT CGCGGTGAAC ACTTACGGGA TGAATTATCC TCATGGTTTG TACGTGATGA 360  
TGCGGGATCA GGATGGTGAG GTGCATCGCT ACTTCATGGG GTATCTCCTG TTCGACTCCT 420  
GGAAGATG TGTGGAACAA TCCTTCGTAT ATCTCTGATG TTCGGTCCGG GGAGGTGCGC 480  
TTGTATCCCG TGTATCCCGC GTCGACGCCC CACGTCGTGT TTGAAGGCTT TATGGTTACT 540  
AGGGACGCGG CTCATGCCGG AGGGGACTAT GTTGGTTATT TCAAGGACGT CAAGATTATC 600  
TATGATAAGG CGGTGCTGAG TACCGTGCGC GATTTTGC GG ACGAGGACCT GTGGGGTATC 660  
CAGGCGCGGC GTGAGGCTGA GCGTAAGAGA GTTGAGGTTG CGCGTTTCGG GCAGCAGCAG 720  
GTGCTGCGTT ATATAGAGCA AGAGAAGCTT GCTACAGAGG TTGGTTTAC ACCCTCTGGG 780  
GGTGCTCAGC GGCAGGAAGA GCAGCAGTAG TGCAGTAGTC TTCCTAGGGA gAGGGGGCGG 840  
TGGGGTTCTA GGCGCGGGGC GTGTCTTTTC CCTCTCTTCT TTTCTTGGGT TTTAGCGGTG 900  
TTTTGGCGTT CGGGGAGGTC GGATGGGTAG GAGTGTATCC GCCAGGAAGA GGCATGATCA 960  
GAGTGAGGTG CGTAGGATGC GTGGTAGGAT GGCTAGGTCT GCGGCGCGTA CTTGTGCGCG 1020  
GAGGTATTTG GCTGCTGTTA CATCCGGGGA TAGGGAGAGT TCTCTGCCTC TACTTAGGAG 1080  
CTTGGTGAAG CGACTTGACA CCGCTGCCCC GaAAGGTGTT TTCGCTAGAA AGGCTGTGGC 1140  
TCGCCAGAAG TCCCGAATGT GTAGACTGTA CAACGGTGTG TTCTCTTCAC CCGAGGTGGT 1200

GCGCGTTTGA	GGCGGCTGTT	TGCCCCGCGTG	TGTTTCTTGT	CGTGAAGAGA	GTTAGGAGAA	1260
CGCGGTCTTT	CGTTGTCGAT	GCACTTTGTG	ACGAGgTGA	TTTGAGCCGT	CGCCATGTCG	1320
CGAGGGTTGT	TGATAGCTTT	GTETCTGTGG	TAACCGCTGC	ATTGGAACGG	GGGAGACAG	1380
TCGAGCTGAg	GGATTTtGGG	GTGTTTGAaG	TCTCGCGTGC	GTAAGGCTTC	CGTCGGAAG	1440
AGCATAAAGA	CAGGGGAgGT	GGTCTCTATT	CCAAGTCATT	GTGTGGTAGT	GTTCCGCCCC	1500
AGCAAGCGTT	TAAAGAGTGC	GGTGCGGGGA	TATCGTTCGG	GGGAGGTTGG	TGCGGATTGA	1560
GGAATGGTGT	CGTTCCCGTC	TGGGCGAGTT	TTTGTTGTTT	GTCTGGCGG	TTTCCCTGTT	1620
CGCGCTCTCT	CACCCTAACC	CTCTGCTTCC	CAGAGGGTGT	GCTCTCCTAG	CGTATGGGGC	1680
GCTTGCTCCT	CTCTTCTTT	TGGTAAGGTG	GGCCTCGGGT	TTTGCGGTTG	TGTTCTGGGG	1740
GGGTGCGTAC	GGCGCGTTCA	GCTACGGTGC	GTTTTCTTAT	TGGCTTTTTG	TATTTTCATCC	1800
GGTGGCGTTG	TGCGTAGTTG	CCGGCTTCTC	TGCGCTTTTT	CTTGCGGCGC	TGTGTCTTGC	1860
GCTGAAGGCT	GGTGGTGCAT	TTTGGCAGCG	GCGGGCGCTT	CTCGTGCAGT	GTCTTGTGTG	1920
GCTTGGGTAT	GAGTACGCGA	AGACGCTTGG	TTTTCTTGGT	TTCCCTTACG	GGGTATGGG	1980
TTATTCGCAA	TGGCGTGAC	TGCCGCTTAT	CCAAGTTGCA	TCGGTCTTCG	GTGTGTGGGT	2040
TGTTTCTGCA	TTGGTGGTTT	TTCTTCAGC	GTGGCTCGCA	TCTGTCTTGG	GGCAGTGGGT	2100
TGAGGAAAGT	GAAAGGAATG	CTCGGGCGTT	TTTGTCTGCC	GCGTATAGCC	ACTGGGTTTC	2160
GGCGCTGGTG	TGGGTGGTC	TGTGTGGGTT	TTGTGTATGC	GCGGCCAAGG	CGGGATGGTG	2220
GCCGGATTGC	ACAGCTCACA	CGCGGGCAAA	GGTTGCGCTC	GTTCAGCCTA	ATGGTGATCC	2280
GCGACGCGGC	GGTATCGAGT	CATATCGGGC	GGATTTTAGC	ACACTGACGT	ATCTTTCTGA	2340
TTGGGCGCTT	GAGCGGTATC	CAGATGTTGA	TTTGGTGGTG	TGGCCGGAGA	CGGCTTTTGT	2400
TCCTCGCATC	GA CTGGCACT	ATCGCTACCG	GCACGAACAG	CAGTCATTTC	AGTTAGTATG	2460
CGATTTGCTG	GA CTACGTGA	ACGCCAAGAA	CTGCCCCGTTT	ATTATCGGTA	GTGACGACGC	2520
ATATAAGAAG	CGCACGAAGG	AGGGGAATtG	GGAACGTGTT	GATTACAATG	CGGCGCTTCT	2580
TTTCATTCCCT	GGGGTGAACG	TGCTTCCGCC	GAGTCCGCAG	CGGTACCATA	AGATAAAGCT	2640
TGTTCCCTTT	ACGGAGTACT	TTCCGTACAA	GCGGGTATTT	CCCTGGTTTT	ACAACTTCTT	2700
GGAAAAGCAG	GATGCGCGCT	TTTGGGCCCA	GGGGAGTGAA	TTCGTTGTGT	TTGAGGCACG	2760
AGGGTTAAAG	TTTTCTGTCC	CGATTTGTTT	CGAGGATGCG	TTTGGGTACA	TCACGCGTGA	2820
GTCTGTGCG	CGTGGTGCCT	CTTTGCTCGT	CAATATTTCT	AACGACAGTT	GGGCAAAGAG	2880
TCTTTCTGT	CAGTATCAGC	ACCTGAGTAT	GGCGGTGTTT	CGCGCAATCG	AAAACAGGAG	2940

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GGCACTGGTG CGTGCAAGTA CGTCTGGCCA GACGGTTGCA ATTGCGCCTG ACGGGCGTAT 3000
ACTCGATGAA CTACAGCCCT TTGCCCCGGG AGTTTGGTG GCGGACGTTT CGATTGTCAC 3060
ATGCGCATGC GGAGGCTACC GGTATTGGGG GGACGCGTTG GGAGTCTTTT TTTGTGTGGC 3120
GTCCCTTTTT ATATTGATTG CTGGTGGTGT GCGCCATATG CTGAGATGCA GGAGGGGCGG 3180
GTGGCGTTGA AACGGGTTAG CGAAGGGCAT GGCAAGACTG TTCTGGGTGC GAAGACGGTG 3240
TTCGACGGGG TATTGCGATT CAAAGGTAAC CTGCACATCA GGGGAAAGTT CTCCGGTGCT 3300
ATCGATGCGC AGGGCTGTTT GACCATTGCG CCGGGTGCGG TGTGTGCAGT TCAGTACGCG 3360
CGTGCTGTTT CTATTTTGTG TGAGGGGGAA GTGAGAGGGA ATCTGACGGT GGTTGATCGT 3420
GTGGAGATGA GGGATGGAAG CCGAGTGTTC GGGGaTGTCa CTGCTTCTAG AATTAaAATC 3480
TGTGATGGAg TTACGTTTGA GGGGTCTGTT TGCAaGACTC GGGaAGGGa TGTTCGAAG 3540
CGGGATCTAT TTTCTGTCCA GTCTGAGCAA TTGAAGGAGC ATCTGCGTCG TTAGCGTAGA 3600
TATGGTTGGG TCTTGACTGA ATGCCtAAAA GAGGCGCCAC AGTTCCTGTA TACACCACGT 3660
GAAGTTAAGG GTGTCGTCTT CTGTTTTCCT GGTGTTCAG TCTTTAGCCA ATTTAGGTGA 3720
GAGTGTTCCT GGGCGGTAC TCCTTGACG TCGGTTTTTC TTTCCAGGGT TGTAGCGTGC 3780
ACGGTGCTGC GTGCTGTTCA AACCGGTGTC GGTAATCTCG GTGTGTAAGT TATGAAAGTT 3840
TCTGTGGTA CCGTCGTC 3858

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## (2) INFORMATION FOR SEQ ID NO: 33:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 878 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

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TCACCATATG GAAATCGCGG TTAGGAATC ATCAATATTA CACAGCTgtA CGGGGTCGGT 60
TCTATCAGGG AGCGGAAAGA AATACAAATG GTGGTTCAAC TTGAAGAGTG GAATTCTTCA 120
AAGGCCTATG ATCGTCTCGG TACGCAGGAG CTGAACACTA CTATTTTGGa CGTCAGTGTT 180
CCCCTTATAG AAATACCGGT AAGGCCCGGA AGGAACATCC CCATCATCCT GGAGACAGCT 240
GCTATGAACG AGCGTTTAAA GCGTATGGGC TATTTTCTG CAAAGGAATT CAATCAGAGC 300
GTACTCAAAT TGATGGAGCA GAATGCAGCA CATGCACCGT ATTATCGGCC AGATGATACG 360
TACTAGGGGG CTAaaaaACG TGCGGTGTAT GCGGTTGGAA GGAAAGCATA ATGGTCGTAA 420

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AAACGGTGCG	CGTGCTTAAT	CGTGGGGCG	TACATGCGCG	TCCTGCGGCG	CTTATTGTGC	480
AAGCGCAAG	TCGCTTTGAT	TCGAAGATAA	TGCTTGTGCG	GGATACGATC	AGAGTGAATG	540
CAAAGTCTAT	TATGGGTGTT	ATGGCTATGG	CTGCAGGGTG	TGGAAGTGAG	CTCGAGTTGG	600
TTGTAGAAGG	TCCAGACGAA	gTTGCTGCAT	TGTCCGCCAT	TGAGCGGCTA	TTTCAGAATA	660
AATTCGAGGA	AGAGTAAATA	CGCTCTTACG	TGTTAGAACG	CCTGTGTTTG	TGCTCTTTGC	720
GTGATAGGGG	TACTGTACAC	TGAGATAGGG	AAGGGGCAGA	AGGGATGTCC	GTCTGGCTTT	780
TTACCGGACC	TGAAATAGGG	GAGCGAGATA	GTGCAGTTCA	GGAGGTGTGC	GCGCGTGCAC	840
AAGCGCAAGG	GACGGTGGAC	GTACATCGGC	TCTATGnG			878

## (2) INFORMATION FOR SEQ ID NO: 34:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5819 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

TCCAGTCTAT	TAATnGTGGC	CGGGAAnCTA	GAGTAAGTAG	TTCGCCAGTT	AATAGTTTGC	60
GCAACGTTGT	TGCCATTGCT	ACAGGCATCG	TGGTGTACAG	CTCGTCGTTT	GGTATGGCTT	120
CATTGAGCTC	CGGTTCCCAA	CGATCAAGGC	GAGTTACATG	ATCCCCCATG	TTGTGCAAAA	180
AAGCGGTTAG	CTCCTTCGGT	CCTCCGATCG	TTGTCAGAAG	TACAGGATCA	CTCGCAGGCA	240
ACATTTTGTG	GnAAGCTCTG	TAGGGAGATG	GGATTGGCGG	ACTGGAGTAA	TCCTGCAGTT	300
GTGTTGGAGC	GCAAGATTCTG	GGCCTTTACT	CCCTGGCCGG	GTCTATTAC	CTATAAAGAT	360
GGGGAAAGGA	TAGCGATTTT	GCAGGCGAGG	TCGTGTGAGT	CTTCGTTTGT	TCCCCTCGCT	420
CCTGTGGGGA	CAGTGCTTGC	TGCAGATAAA	AATGGGGTGT	TTGTCCAGAC	AGGCGATGGA	480
GTTCTGTCCC	TTTACAGTT	GCAGCGCTCC	GGGAAAAAAC	CTCTGTTTTG	GAGAGATTTC	540
CTCAATGGTT	CCCCTCTATT	GCTGACAGGT	AGGTTAGGGG	TGTGAGTGAT	ACACGCCAGG	600
CGTGAGATTT	CTACGCAACG	CATGATGCGT	ACCCCAAGTG	TGTCTTGTTA	CAGAGAAAGG	660
GGAGGTTGGT	TTGTCCGAAG	AAATTCTCAC	GATAGAAGAG	GTTGCGCGGT	ACCTGCGAAT	720
TTCTGAACGT	ACCGTGTATG	AGTGGGCGCA	AAAGGGGAAG	ATTCCGTCAG	gAAAAGTGGG	780
CACCGTGTGG	CGGTTTCGCA	GGTCAGAAGT	TGAGCGATGG	GTTGACACTT	GTCTTTCCTG	840
TTCTCACAGA	CAGAGCCATT	CGGATGTTTT	GCCCATTGAG	CGGATCCTGT	CCACCGATCG	900



TATCCTGCAT CTTGAACAGT CTGAGCGTCG TCCGGCGCTC TATGAGCTTT CTGATTGCTT 960  
GAGCACTGCA CCTCAGATTA AAAATCGTAG CGAGCTTGCG GCAGAAATAG TGCGGCGCGA 1020  
GGAGCTCATG TCGACTGCAA TTGGGTGTGG TATTGCAGTT CCTCATGTGC GCTTGTCTTC 1080  
TGTAAGTATG TTGGTTATGG CGGTAGGAAT TTCAAAAAA GGTATTGCTG ATTTCCGGTCC 1140  
TCTTGACGGA CAAGACGTAC ATCTTGTTTT TATGATTGCC GCTGCTACCA ATCAGCACCG 1200  
GTACTATTTG CAAACGCTTT CTTTTTTTAG TTCAAAATTG AAAAGGCCCG ATTTGCGGAC 1260  
GCGCCTCTTG CAGACTAACA CCGCGCTAGA AGCGTACACC GTGTTGACAG AGCAGTCTAG 1320  
TTTGTAAGAT TTAGAAGAGA GCAGGATTGT TCAGGCAGAG GGAAAGCATT GACCTATTTT 1380  
TTTGAAACGT ACGGGTGCCA GATGAATGTT GCAGAGTCTG CTTCTGTAGA GCAGCTCCTG 1440  
TTGGCGCGGG GGTGGACAAA GCGGGTAGAC GCGCAGACGT GCGACGTGCT GATTATCAAT 1500  
ACGTGTTCTG TGCGAATTAC AGCAGAAACG CGGGTCTTTG GGAGACTTGG CTTATTTTCT 1560  
TCTCTTAAAA AAAAGCGTGC GTTTTTCATT ATCCTTATGG GGTGTATGGC ACAGCGTTTA 1620  
CACGACAAAA TTCAGCAGCA GTTTCCTCGT ATTGATTATG TAGTGGGTAC GTTTGCGCAC 1680  
GCGCGATTTG AATCCATTTT CCAAGAAATT GAACAGAAGC TTACCCAGAA AGATTACCGC 1740  
TTTGAGTTTA TCTCCGAGCG TTACCGGGAG CATCCTGTCT CTGGGTATCG TTTTTTCGCT 1800  
TCTTCATATA GCGAAGGTTT ATTCCAAAGT TTTATCCCCA TCATGAATGG CTGCAATAAT 1860  
TTTGTTCGT TTTGCATTGT GCCATACGTG CGTGGACGGG AGATCTCGCG TGATCTTGAT 1920  
GCTATTTTGC AGGAAGTGGA TGTGCTCTCT GAGAAAGGAG TGCGGGAAAT TACGTTGCTC 1980  
GGACAAAATG TTAATTCGTA TCGGGGAAGA GACCGTGAAG GgAACATAGT TACCTTTCCC 2040  
CAGCTGTTGC GTCATTTGGT TCGTCGTTGC GAAgTCAAAG ATCAGATAAA GTGGATCCGC 2100  
TTTGTTTCCA GTCACCCTAA AGACCTTTCT GATGATCTGA TTGCTACTAT TGCTCAGGAA 2160  
TCTCGTCTGT GTCGTCTGGT GCATTTGCCA GTGCAGCATG GGGCGAATGG AGTGCTCAAG 2220  
CGGATGCGAA CGGAGTTACA CGAGAGAGCA GTATCTGTCT CTGGTGGGTA AACTGAAAGC 2280  
GAGTGTCCTT AATGTGGCGC TGAGCACAGA TATTCTTATT GGGTTCCCGG GGGAGACGGA 2340  
GGAGGATTTT GAGCAAACGC TGGATCTCAT GCGGGAGGTG GAGTTTGATT CCGCTTTTAT 2400  
GTATCACTAT AACCCGCGCG AGGGAACGCC TGCCTATGAC TTTCCCGATC GTATCCCTGA 2460  
TGCAACGCGG ATTGCGCGTC TACAACGCGT CATTGCTCTG CAGATGAGTA CTACTTTGAA 2520  
AAAGATGCGC GCACGGGTAG GAAAGACATT GCCAGTGTG GTAGAGTCGC GCTCGCGAAA 2580  
TAATCCTGAA GAATTGTTTG GACATACAGA GCTTGGGGAA ATGACCGTGC TTGAAGGAAA 2640

GGTGGATCCT	ACGTACATCG	GACGCTTTGT	GGACGTGCAA	GTGAAGGAAG	TGCGCGGCAG	2700
GACCTTGCGT	GCCCATCTGG	TGCAGGAGCG	TGCAAAATGA	CATATGGAAA	GCTGATTTTT	2760
TTTATTATCG	TACTTGTTGG	TTTCGCGCTC	TTTCATGTCCT	TCAACGTGGA	ACACCGCTGC	2820
GATGTATCGC	TTGTCTTTTA	TACTTTCAGG	CAGTGCCGAT	CACTTTGAGC	TTGCTTTTTG	2880
CCTTTGCGTG	CGGTGCGCTT	ACGGCGTTGC	TTTTTCTTAT	TGATCCGGAC	GCGAAAACAA	2940
GAAAACAGAA	ACGTGAAGAC	AGTCCTACCT	CTGCTCCTAC	AGGCGGCGTT	TCTTCTCCGG	3000
AGCATGTGGA	CGTTCCTTAG	CCAGACTGCA	ATGACACAAA	GTCGCGTCTA	GGGCTCGCAG	3060
GACGGCGCGC	GTGTGCGTGT	TTGGGTTCTC	TGCTTAATGC	GTGCAGTTTT	TGTCCGATAC	3120
ACAGCGCATG	GTGCTGTCGC	GCGCGGTGTG	GCGCTCCTTT	TTCTTCTTCC	ACGTAGCAGT	3180
TGCCCGGTAT	ACGGCGCGTG	TCCAGGAAAT	GGCGATGCGT	GGTTTTCAT	TGCGCAATTT	3240
TCAGCAGGTG	CATGCGTATT	TTGAGCAGCA	TATTCCGTTG	CTTCTTCGT	TTACGGAGAA	3300
AAAGGAAGCG	ctCTCGCTCT	TTGCTCAGTA	TTTAGAATTG	CACGATGCTC	ATGAGCGTGC	3360
GGCACATCGT	TACCGAGATG	CcGGCGTTGT	ATGcGCTGG	GTACTGAGCG	CGTGCACTTC	3420
TTACTTGAAr	CTACGCGTAA	tGCAATGGCC	cgCGGATGCG	CGCGAGTATG	CACGGGAAAC	3480
GTTGGCAGAA	GTCGAGCACA	TAGGTGTGCA	GGTGCTAAAC	AAGAAACAGC	ATGCTACGTT	3540
CTTGTTTAT	CACGTGTGGC	TTGCGCTCCA	TGCGGCGTCT	ACGGCCGCGC	ATCTCCATGA	3600
GCAGTTGGAA	AGATTGGAAG	AGTATGGCAC	GCAGGGTGTG	TTCAATGTGT	TTGAGACGGT	3660
GTTGCTGTTT	ACTCGTTGGT	GGATTACTCA	GGATGAGAAG	GTGGCACAGC	GTCTGACAGA	3720
GAGGTATcCG	CAAAGCTTTG	AAGCACTTTC	GGTTATAGGG	GCGGTGGAAA	TAGCGCCGTC	3780
GGTTTTTTGG	CATTTGATGC	GCGGTGCGTA	CGGAGAAGCA	GTTGAATCAA	TGGGAAAATC	3840
TGAGACAGTT	GTCTTGCAGG	ACGCGAAgCT	ACGTCCTGTA	CCCAGGTGG	TGGCAGCGCA	3900
CAGGACCCGT	CGCGCGCACG	TGGCCGCGA	CGGCACGGcT	GCGCGGTCTG	CTATGTCGTC	3960
GTCCCATAAAT	TTGGGCGTGT	CGATTCTCGA	GGGAGGGGTA	TCTGTGCCCCG	ATGAGGTGGG	4020
CGCGGGAGAT	GAGAAGCCAC	GGGGGTACCA	GCTCGGGTTT	TTTCGAGCAA	AGGAAAATGC	4080
GCAACGGCTG	ATGACGATC	TGGAGAGGCG	TGGTTTTGGG	TTCCAGCTGC	ATACGGTCCG	4140
ACGTGCAGAC	GCGGTGTACT	ACCAAGTTTT	TGTGCCGGAG	GATGATTCCG	GCTTTGTTGG	4200
TCACCGACTA	AAAGATGCAG	GATACGAGAC	GTTTCCCCCTA	TTCTAGGGGG	CCGGCACACA	4260
TCGGTGTTTT	AGAATGAGTT	CCTGTATAAG	GTGGTGCATA	AACGCGTGGG	GAAGCTGTGG	4320
ATATGGGGAT	AGCGTGGGGA	AAACCAGGAA	TAAACCCGTG	GAATGCAATT	GCTCAGCAAC	4380

GCATCAGGGC	GAAGGAGCAC	TAGCCGGACC	GGCGTGATAT	CTGGTGATT	GACCGTCCCA	4440
CATCGACGTG	CTGCCAATTT	TGAGCCGTGC	TACGTCTTCA	ACCGCCCTTA	CGTGTATCAC	4500
CTCGTGGGAT	TCAAATGTTA	CCTCAAGGCG	GCGGCGGATG	CTGGAAATTG	CGGTGTTGCG	4560
CGTGAGAAAT	GACACCGTCT	TGCGGTGTGT	GTGCGCGCTA	TCTACCAGGA	AGATTTCTTG	4620
GACTGATGCG	CGTGAGAATG	TGATCTCCGC	GTGTTCTCGG	TCAAAAAACA	GCAGAGGATG	4680
GATATCGCCT	GAGTTCGGGG	AGATTTCACT	TTGTATCCAC	AGTCCTGCCA	AGAGGTGCTG	4740
GAGTGCTCCC	TGTTCAACCAT	GTgTTGCACg	kTTCCAAAGG	GCTATGCGCA	TTGCTGTTTG	4800
TACAGGCGGT	TGTGTGTGTG	TCTGTGCTnC	TCCGCCTACA	GGGCGCGCG	GGGCGTTTCC	4860
ATGTGACCGT	GGGTCTGTCT	TGGTGGACGA	GCCGGACGTA	TTGTCTGCCG	TGTCAGACGG	4920
GTGTGCGGCG	GTGTCCCGCG	CGTTGCTGGG	AAGTGACGCA	GTGGGTAGAG	CGCCGAAGGT	4980
ATCATGCGGG	GGAATTCTGC	GTGGAGGAAC	GTGACCGTGC	TGAAAGCAGG	AGAAAATATA	5040
TAGAGCCAC	GCAGCGACGA	ACAACGATCC	GGCCACACTC	AGTAAAGGTC	TATTCACGGG	5100
ACGCTTCCTT	GCACGCAGTA	CGGAGGCACC	AGCCTAGTCA	AGCGAAGGGG	TATAGCGCGG	5160
ACTACTCTCT	TTTGCAGGAG	GAGTAGGGGT	CGGGCGTTTC	GAGTGCGCAG	CTGCGATGCT	5220
GCGATACAGC	TCCCGCGCCG	TGTGGGCAAC	GCGGTCTGTC	ACGGCCATAT	CCAAGGTGAT	5280
TTCGTACCAG	TTGTCTGTGT	TTACGCGTCG	GGCTCTAACA	AGGTAGGGAC	TTTGAAAGGA	5340
ACGCTGTTTG	CCACGGTACT	TTGAGGTGAG	CGGTGCGTCG	TGCTCAAGGT	CGGTAACTAA	5400
CAAGAGAACC	TTGTGTGCGT	TGTGTCTTTT	TCTTTTTTCT	TGTATCTCCC	AGACGGTATC	5460
TAAAGCGCGG	CCGATGTCTG	TGTAGCGACC	GTTTGGGACA	ATGGAATCGA	CAACGGAAAT	5520
AATTTTATCT	CGGTCCTGCT	CACTGCGTAA	GGTGAGGGTG	ATAAGTTCCT	CAGGCTTTTC	5580
GTAAACTGG	TAAACGGTTA	TCCAGTCGCC	TTGGATGGTC	ATGGAGGAGA	CGAACTCATC	5640
GCGCACCCAG	CGGTGTAAAC	TGCTGAACTT	TCCTGTTTCT	TGCATGGAGC	GTGATTTATC	5700
TATCATCAGG	AAGATGTCGA	CGGGGACAGT	GCGTTCACTG	CATGCAGGCA	CAGGTGGATG	5760
AGAAAGGTGC	AGAGTGCAGG	ACAAAGCGCT	TTTTTCAGGT	GCATTAGATA	CTCCTTTAT	5819

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25187 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

TGTGGCCTGG CGCGCTGCCT CATCTGCCTG CGCAAGCTTG AGCgCAAGCG TCTCGTTTGT	60
CTGTGCACTT CCTACAGCAG GAGCTTTTGC ATACGCGTGA TCAwTACACG CCAGTAATTG	120
TTGATGCGCA AGCAAATCCA CATAGCGACG CAAAGGACTG GTCACCTGAC TGTACTGAGA	180
cAGCCCGAgT GCTGCGTGCA CCGCGGCGGT TGTGtCACGC GACGAGCTTT CATCGCGCGC	240
CGCTTTTTGT ACTCCCCCGC CAATCCCGCT GGTAtTGCAC GGGCAGCTGA GGACGTTCCCT	300
GACTCACATA AGGAAAGGCA AGGTTATGTA GAAAGGCAAA CCGTGCTGCC GCTTCTCCCG	360
CTAAGAGCAT GAATTCACGC ACCATGCTCA TAGACTCGTA CGACTGCTGT GCTTCAATGT	420
GAACACGCGG CACCTTTTCC TGTGTATCGG GCACGTCCCC GCGTTTCATT TCCTTTCCCG	480
CTTGCCCTGT TTCTTGACACA GGAAAATCTA CCCTCATGTG GACATCAGGA AAGCAAATGT	540
CCACTGCGCC GCGCCCTTTT CTCCGTGCAA TGTGTGTGCG CGCAAAGTCA AAAAGAGGCT	600
GCAACGCGGG GGTATCGCGC TGGGAATCCG CCTCCGCATA GGAAAGGCGC GTAACACGCA	660
CCATGCTCCG GAGCACGTGC ACACAGCTGA TGTCACCGTG CTCATCAAGT AAAATTTTAA	720
AAGACAGTGC AGGAGAAACT GCGTCGCGCG CGAGTGACACA CGTATCAACC ACCACGTCGC	780
TGAGCATGCG CACTGCGCCT TCAGGCAAAT AGAGCGAaA CCCCCTGTAC GTGCGCATGC	840
ATCTGCGTGC GAATCAGGAA GAACGAGCTC TGCAGGGCTC GCTACATGGA TCCAAAAATA	900
CGTACCATCG AAAGTGATCG CATCGTCAGG GTCGCGCGTA CCCTCCCCAT CGATGGCATA	960
CGCGGCAAGA TGCGTACAAT CTGTGCGTGC TTGAGTGACA CACCTATGTG TGTGCACATC	1020
TTGCTGCGCC GCACGTTCTC CATCAGAACC AGACACATGA GCAGGACTTA AAAATAGAGG	1080
ACACAGACGA TCAGGATACG GATTGCGATA CACCGGCCAG AACCCGAAGT GCAAGAGTAT	1140
TTCATGCGCT TGCTCCCTGT GCTCGCAGCC TAAGGCACAC TGCAAAATCT TACAGCGATT	1200
CGCGTGCCCC AACGCGAAGC CTTGATTTC CTGCAGAAAG GCGGTAAACT GCTCGTTCAC	1260
CTGCGACACG TGCACACGAT GCATTCTTTC CTGCGCAGTT GGTGCCATAT TGCCTGCACT	1320
TCGTGCGACG CGCCGTAGCT CCTGGATGAA CGCCTGCTTT AACGCCTGAC GCGCTTCCTT	1380
TTTTTCTTCC TGCACTGCGC AGGATGCGCA CTCTTGCTGA GAGCGGATGC GCACTGCGGc	1440
GGCAGGCTCA TTGCAAACAA AATACGCACT TTGCACACTT TGCTCCCAAT AGGCCCCACGA	1500
CTGCGCGGCA GAAGCCCCC AGAGGAGCTC TGCAAGTTCA AAAAAGGAAG GAGCTTCGGT	1560
ACCGAAAAAC TCGCGCGCGT CCTGTACGGA TTCCTCGCTT ATACGCGCAA TGTGAGACGC	1620
AGACAATAGT TCTACCAGGG AAGAAACAGT GCCCCGGTGC AAGAGCAAAA CGTCTTTCAC	1680

GCGCACGcGT	CTTAACCCGT	GTTcGGTTTC	AATGGTGATC	TTCGCATCCT	TCCCTCGCTc	1740
GATtAgGTGT	ACACACGCAG	GGCGCTTTTCG	ATAGAGCACC	GGACTCCCCA	CATGTAGTTC	1800
CATCACGCAC	tGCGCCTGCA	GTATGCGCTG	AATAGTTTTG	AGTACGCTGT	CTACCGAGTG	1860
ACTGCAGACA	GGCGCACACC	ATCCgTCGAA	CACGCTTGaA	CCACCCCATa	CGCACACGCT	1920
CAGCACATGC	ATATGCCGCA	GCATGCAATT	GCCGAACCGG	CATATCTACG	CTTCCTACAC	1980
GATGGAATAC	GAATCCGCCA	AAACCTGTTT	TAAAACGGTA	CAACCCGTGC	ATTGGGTGAC	2040
GCACATCGTC	CGTTGGCGGA	ATACCGTAAA	AATCATACCA	AAGACAGnCc	GCGCGCACGC	2100
GCTTCTTGAA	TTGCATACCA	TTGCAGCGCA	TACGGTGCCA	TAAGATGGCG	TGCTGAATAG	2160
TCAGAAGCTC	CATACACATA	AGTTGCGCAC	GTGTCAAAAC	ACAACAATAC	CAAAGCTGCA	2220
ATTGCCTGCT	CATCAGCGCA	CCCTAATTCT	CTGTCTTCCG	ATGCCGGGGG	ATGGGGTGTC	2280
TCTATGTTCT	TCGGTGTGTC	TTTTCCTGCA	ATACGCACCC	GCAGTGCTGC	ACGCGGAGCA	2340
TAGGCAAGAC	AGAGCACCAG	CATCCCCGTG	GCTGCAAATG	CGGTGCAAAA	ATCGCGATAA	2400
TATTGACGGG	TGTGGATGGC	AATGCGATCA	CGCGCCGCAG	TTTTTTGGTA	CAGCGCGTAA	2460
AACACATCCA	CCGCCGCGCG	CAGACTACCC	GGAGAACCCT	CCTGCGCGAG	cGTATCAAAA	2520
CGCGCCaCAC	GCACACCGTG	CTTTTGCGCA	CGTCGAACGT	TGTAGCGCCA	TTTTGGTTTG	2580
AAAGCAGCAA	AAATATCTTC	CCgcGCGGGG	CGCATATCCA	ACAGCAATGT	ATCCTGAGGC	2640
TGCACGTTAC	AAGCAGCGCG	CCGTAGTCCA	CACGCGTGGA	GCTCTCGCGT	AAAGAGCTCC	2700
ATCTCTGTTC	CCACCGCGCA	aTGCGTAGAG	GAGGATGCAA	GAGAAGGGAG	CGAGCACACC	2760
GCAGCAGCCC	ACCCCCACGG	GGGATCAAAC	CGCACGAGGA	ACGGtTACGC	ACGAAAAAGG	2820
GAAGTAGCGC	GCTCGTTAAC	TCACGTAGCA	GACTGGCACG	TGCGCGCGCC	ATCTGCCGTG	2880
ACGGAATCTG	ATCGTCCTGA	AGATACGGGG	GAGCACCCGG	CGCATACGCA	AACACGCCAA	2940
AGGGCTTAAT	ATTCTTGAC	AGAATGAGCA	GGGGAAAGTG	TTTTTCTCCC	CCAGTGTTTG	3000
CATCCGGGCG	CACATGCACG	CTGAACACGT	ACGTCTGCCA	GCCGTACGCT	CGCTTGAAGT	3060
GCGCCACGC	AGGACTTTGT	AAAAACGTTT	CTGCAGTCCA	CGTCTCCTGC	GTCCACTTTT	3120
GCACGGTAAC	TACGAACATG	GGGCACCCAT	TGTACTGCTC	CCCGTGACCC	GGATCCAGAT	3180
ATCTCCCAAA	AAGCTCCATT	ACCTGCCGTG	CGCTCCCGGT	ACGCTCTGTA	TGCAGAGGGA	3240
TACGCTCTCT	CCCTCTTGCA	ATACATCCGT	CCCTTACCCC	CACACACGCA	GGGGCATgCA	3300
CAaTGCTAAG	AAGCACACAT	GAGCACCCCTg	ACCGTTACCC	GAAGAACATG	CACAATGGgC	3360
GAGCCTGTGT	GTTGCGGTCTG	AggTCCGAAG	CGCACAGTTC	TTGCGCAGAA	AGGAGCGCAC	3420

CCTATGGCAG TGCCCCGAGC AAATACyTCA AAAGCAmGCA CCCGTAGAAG GCGTGCGGTT	3480
AATATGCGGC TTGA <sub>g</sub> GCCCC GCATCTTGTT GAGTGTGGGA ACTGTGGTAA TTTTGTGCAG	3540
TCTCACCGTG TGTGTGGTAG GTGTGGCTTC TACCGGGGGC GCCAGGTGAT TAACCCTGAT	3600
GACCTTTGCT AGTGCCCCGTG CGAGTGTGCA CCTGAGCGAC TGCCTTTT <sub>g</sub> C TCGCGCACAA	3660
GGAGGCTGCC CCGTGGATGA GTTGTTCTTA AGAATGAGGG CATTAGTGGC AGAGAAATTA	3720
GAGGTGGAGG AGGCGTCCAT CACGCTTGAT TCCTCCTTCC GAGGAGATCT CGGTGTGAT	3780
AGCCTAGATA CCTACGAGTT GGTCTATGCG ATCGAAGAGG AGATGGGGAT TACTATCCCC	3840
GACGAAAAAG CAAACGAGTT CGAAACAGTC AGAGATGCGT ACGAGTTCAT CAAGTCCAAA	3900
GTGACATGAG CCTGTGTCTC GGTCAATTTT TTTCCCGCTC TCGTTCTCCC CTCACCCCCG	3960
AGCGTAGGGA GTCTCTCCGG CGCCTGCAAG AGACGCTCGG CGTTAAATTC CGCGATCCTA	4020
CCGCACTCGA CCAGGCAC <sub>TT</sub> TCTCACCGGT CTTTGT <sub>TTT</sub> C CTCAAAGAG GACCATTGCG	4080
GTGTGCGCCA CAATGAGCGC ATGGAGTTTC TCGGGGATGC CGTGCTTGCC GCGGTAGCCG	4140
CCG <sub>c</sub> TTG <sub>g</sub> CC TGTATCGCGC ACTTCCCGAC AGTCACGAGG GGGATTTAGC AAAGACTAAG	4200
GcGGTGCTCG TGTCTACTGA CACCCTCTCG GACATTGCCT TGAGCCTGCG TATAGACCAC	4260
TACCTTCTGC TAGGAAAAGG GGAGGAGCTT TCAGGAGGTC GGCACAAAAA AGCCATCCTT	4320
GCCGaCGCTA mCGaAGCTGT CATCGGTGCG CTTTTTTTGG ATTcAGGkTT CAAGGCGGCA	4380
GAGCGTTTTG TTCTCCGtCT CCTgCTCCCC CgTgTCCGCC CCaTaCGAGA GAAAAAtTTG	4440
CACCATGACT ACAAATCTAC CCTCCAGGTG CTTGCACATC AGCGCTaTCG TAGTAAGCCG	4500
GAGTACACGG TCGTCAAGCG CACCGGACyT GATCACAgCG TACGCTTCTG GGTGGATGTT	4560
ACCGTTGGCG ATGCACGCTT CGGACCCGGT TATGGCACCA GCAAAAAAAG CGCAGAACAG	4620
TGCGCCGCTC GCCTTG <sub>C</sub> ATG GGAACAATTA TCCGGCACCC TCCGGGAGTA GCGCGTATGC	4680
TGCCCTGTAA GaTACTCTCC TTGTCCCGCT CTGACACCGC CCGCCCC <sub>TT</sub> C GTAAAATGGG	4740
CAGGAGGAAA GCGCGCCCTC GCCCAACCC TTTT <sub>T</sub> TGCGCA TATGCCACAG ACATT <sub>C</sub> GGCT	4800
CCTACTTTGA GCCTTT <sub>C</sub> GTG GGAGGGGGAG CGCTCTTTTG GCACTTGTGC GCGTGACTC	4860
GGGTGCGCCT ACACGACATC TATCTATCTG ACATAAATTG GCCACTGCTG TGTGCGTATG	4920
CAGCCGTTCG TGACCGTGTA GAAGAACTTA TCGTCCGGGT TGGACAGCAC ATCGCCTGCC	4980
ACACCCCTAC CTATTACCGT CTTGCGCGGC GTAAATTCGC CGTATGCGAG CATCCGCTCG	5040
AGGTTGCCGC GCTTTTCCTG TACCTGAATC GGAGCTGCTA TAACGGACTG TACCGTGCA	5100
ATAAAGCAGG TCAATTCAAT GTGCCTCTCG GACGCGCTGC ACCTGCGTCT CTTTTCTAA	5160

ATACCACCGC GCCTACCCCT CGCAGTACAC AGCCTGCGGC GCAGGTCGGa CACCTTGcAA 5220  
TACGCATTGA TGAGGAGAAT TTACGCAGCT GCGCGCGTGC GCTAGCAAAC ACCACTCTTA 5280  
ACTGCCAACA CTTTTCTTGC ATTCAACCTG CACGAGGAGA TTTTGTGTAT CTCGATCCAC 5340  
CGTACCTTGc ACCTTCAGTG CCTATGATAA AACCGGTTTT GATAGAGCAG CGCACGAATC 5400  
GCTTGCTGCG TTTTGCATGC ACCTAGACGC GCGGGGAGTT CTTTTTATGC TCTCAAACAG 5460  
CGATTGCCCT GAGGTACGCG CATGGTATCG TCCATTCCGT GTGCAACAAC TCAACGCCCC 5520  
TCGGTGTATC GCACGATCCG CTCACGcAAG GGGAAAAAGG TGCGAAGTGC TTATCACCAA 5580  
TTACCCCTGC GCTGACACGG CTACACCGTA GCTTCTGCA CTCTCCTGGC CGTATCGCAT 5640  
CGCGTATTGC GGCGTTTAAT GCCACTACAG AAGTTTACG GTCATAAAAA CCATCCGTGG 5700  
GGACCCGCGT GCTCTGCGAT AATGCTTCGT ACACACTGCA CGTATGACGT AGTAAAAGAT 5760  
ATAAACCGT AGAAAAACGT AACAAATGCA GATACTATGC CCGCCATGTA CAGTCGAAGG 5820  
GGAACCGTGC CACATCTTAC CTTTGAAGCG GCACTCAGAC ACTGTGCCCA GCACTTTGGA 5880  
TCTCAAATG CAGTCTGCTT CCTAGGCCAT GCTACGGACG CGCATTCGCG GTGCTGCTTG 5940  
AACTACCGTC TCTTTCACA GCGTGTGCGC CGTGCACGCC AGTTGCTGAT GCGCTGTGGT 6000  
GTGCGCGCAG GAAGCTGCGT TGCCTCTTTT GGCCCCAACT GTCCACAGTG GGGAGTTAGC 6060  
TACTTTGCAA TAGTAAGCCT TGGTGCCCGC GCAGTCCCTC TCGTACCAGA GCTCAGTCCg 6120  
CAGaGCTGCG CCGCTGCCTC CAGCATGCTC ACGTTTGCTG TGTCATTGCG GGCGCTGCAG 6180  
AAAGAGAAAC ACTCGCCCA GCGGATACAC TCACCGATCC GGACGCTGCT TCTTGcTCCG 6240  
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ACTCGCCGCA GCAGGCCTTT CTGCACCGCA TATTGCCGCA CGCGCAGAAT GGCTGTTAGC	19440
CCATTCAGTT GGGCAGATTC GGTGAACAGT ATGCATCTGC ACGCCGTTGC TTACAtCCGy	19500
sTGCGctTGC AGCGCATGgG CAGATGGCCG CCATACAGCG GAAGGAACGG GGAGGCCCCG	19560
CCTGCTCACG CCAGGCGCCG GGGGACCGCA TCCGTTTCAA TCGGCGCACA CGCTGCCTGG	19620
AGTCAGAACA TCGTGCTATT TCTTAGAAGT ATGGTCTGT GGTACGcAGC GTACGTTCGT	19680
CCGCTTTTGG ATGTCGCGCT CTTTTCTTC CTCCTGTACA AGACATACGA GATACTTGTT	19740
AAAACACAGG CAGTCCAGTT GGTGAAAGG GCCTTCTCCA TTCTCGTACT CTACGCTTTG	19800
GTTTTCGTAT TAAAAATTAGA AACGCTCCTT TGGATTCTCA ATGCAACTGC CCCGGGCGTG	19860
GCTATCAGCA TTA CTATTGT GTTTCAGCCG GAATTAAGAA AAATTTTTTT GAAAAATTGGA	19920
GAGAAGAACT GGCTCCGACA GCGCGAATGC GcMACCATAC GCACATCGAC GCGGTATTAA	19980
CTGCCGCGAGA TGTTCTTTCT AAAAGGAAGC GCGGCATGTT GGTAGTATTT GCCCGTCACC	20040
ATACCGTGCG CGAGGTCAGT GAAAcGGGTA CCGCGCTGTA CGCGCGCCTT TCATCCAGCC	20100
TGCTTGTGAC TATTTTTGGC CACGATACCC CCATGcACGA TGGAGCAGTC ATtGTGCGCG	20160
ATGGGCTCGT TGTCTCTGCA GGCTCCTTTT tGCCGCTTTC TGAACAGCAC GATATTAGGA	20220
AAACGTTCCG CACACGTCAT CGTGCCGCGC TTGGTATGGC TGAAAAAACA GATGCCATTA	20280
CCCTGGTCGT GTCAGAAGAA ACGGGCGCGC TCAGCCTTGC CTACGATTCA AAGCTGTACT	20340
ACGATCTTCC GCACGCGGAC GTATTGGCGC AnTCAAACAG TTA CTGAAA CTACCACTCG	20400
GGCTGGACAC GCTCAAGGGA CACTGGATCA TGGTCGCAGC ACGTTGTCTT GATAGGATTG	20460
CGCACAATTG GGCTGCCAAG GCATCGAGCA TACTGCTTGC GTTTTTTGCTC GTGCAATTTT	20520
ACAGCGGCAG TCTGCTGGAA CGGCGCGCCA TTTCTGTTCC GTTAGTTGTG AGAAATGAAG	20580
GCGCACTAAC TCCTGCGCTT CGCTTTCCTC AAAAGGTGAC GGTGCTGATG CGCGCTTCAC	20640
GTGATACGCT CGGCGCACTG CGCGGATCTG ACATTGTCCC CTATGTGGAT TTGTCTCTCT	20700
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CACCAGATGC GCTTGAAC TT GTCGCAGATC CTGCCATCAT CCCGTTCAAG CTGGAGCGTA	20820

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AGCTGCGGGA AGTCGACACA AATCCTTCCA TGGTGGAAT TCGCGGTCCG GCCTCTTTGC	20940
TCGTTTCCTA CACACAAGCa GTTACCGAAA CGCTCGACAT AACCAATAGA CGCGCGTCCT	21000
TCTCAGGTGT CATTGGACTT ATCAATCCGA GTACGCTCGT TTCTTTTCCA AAAACTAAAA	21060
CGCAGTTCGT TGTCAGGGTT CGGGAAGTTT CTGAGCTCAA AGAGCTTGAG ACAACACACG	21120
TCTCGTTCAC CGACTGTGCC CCTCACCTTA CGTTCAGCAT CGAACCGGTC ACCATACGTG	21180
CACAGGTGCA GGTGCCAAAG CATGTAATTG AAGAGATGCA CCCAGAGGAG TTCTTCTCTG	21240
TTTCTGCAAG AGAAATTACT GAACCCGGAC GCGTGACCGC TCCCCTTATC CTCTCGCTGC	21300
CCGAACACGT GCGTATGGTA CAGTACAGTC CCAAAGAGGT TCACGTTCAT GTGcGCGAAG	21360
cGcaktCAGT CCCGGCGGAC GGACATGAAT GATCATTTGC GTGGGAATAG ACATAGTAGA	21420
AATAGAACGA TTCGTATCTT GGACACACAA CGTGCGCCTG CTCCGTCGCT TCTTTCATCA	21480
AGAGGAGATT GTAGACTTTT TTA AAAACCA CATGCGAGCG CAGTTTCTTG CCACGCGCTT	21540
TGCCGCAAAG GAAGCATTG GAAAGGCACT CGGTACGGGA CTCAGAAACA TGGAGCTAAG	21600
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CCGGTGTGCA CAACCGTCTT CCAAAGAGAA GAAATGCATT CTGGAGGAGG TCGTACCATT	21900
GCTGGTGATT TAACCGATGA ACTAAGAAGG ACATACGAGA CGTCCGCAA GTATGGAGAG	21960
GTATTTCCCTC CCATTTACCA CGTGGTAGTT TGTCCACCT GTCTTTACGC AACCTTTCTG	22020
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CGCCGCACAT CAGTTGAGCG GCTCATTCCT CAGGTGGATT TTAGCGCACT GCGCACACTC	22140
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TTTCGTATCT CCTTGAGTAT AAATACGGGA CCAAGCGCGA CAGAGCAGTC AGAAGGGAGC	22500
GCATGCAGCG GaACAAACAA GGACTTGCAA AGATATTTGG CCTAGGAAAG TCTTCAAAAG	22560



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CGATGGAACA	CGATTTTTCG	GATGGCAAAA	ACAGGTCTCA	GGCTCACGGG	AACGTGCTCC	22740
CTCTGTCCAA	GGTGAGTTGG	AAAAAGTTGC	TGAGAAAATT	CACCACCAA	AGATAGCAGT	22800
CATCGGTTCA	GGGAGAACAG	ACTCTGGCGT	ACACGCAGTA	GGACAGGCAG	CACATTTTGT	22860
TACCCCATG	AGAAATATAC	TCGCGTATCG	CTTTATCCCT	GCATTTAATT	CGCTGCTCCC	22920
GCACTCCATT	CGCATTACAG	ACGCACGCGA	AGTCTCCTCT	CAACTCCACG	CACGCTTCTC	22980
TGCCGTCATG	CGCACGTACC	GTTACCACCT	CCACTGCGCA	CCCGTCGCAT	ACGCGCACGA	23040
ACTGCCTTAC	TGCTGGCACA	TTGCGAGAAT	GCCCAGATATA	CACCTTGCTCA	ATCAATATGC	23100
TGCAACACTC	AAGGGAGAAC	TAGACTGCAC	AAGCTTTGCT	GCTGCAGGAG	ATAAAAGTGC	23160
GAGTAAATCG	CGTTATTTT	ACGACACACA	CTTTTCTTTC	AACCATCGCG	TACTGACCTT	23220
CGAAATCTCT	GCTAATGCCT	TTCTCTGGAA	AATGGTGCGC	TCTCTTACAG	GAACCCCTACT	23280
ACACTGCGAA	AAGAAGCGGT	GCTCCGTGCG	CGAATTCGTC	CGCATTTTGC	ACGCGAAAGA	23340
CAGGCGCTTG	CAGGGCCAC	CGCACCGCCG	CATGGGCTAT	TCCTATGGAA	CATCCGTTAC	23400
CCCGAACACT	TACTCCGTGC	AGAATAGGAA	CACCCTCGCA	CGTGAAGTGG	CATCCACAGG	23460
CAATGCAAGG	TGGAAGACGT	ATTAAGCATG	CACGTTACAT	CTCTTCAAGA	AAAGGAATCA	23520
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CACACGCGTA	GTCCgTTCGT	GCTTCACACA	GAATGGGACA	ATCATGATAG	AAGCGACTGA	23640
AGCTTTTGA	GAGTGTATAG	AGATACCCGG	TAATAACGCT	CGGATCATGT	CCCTGTGCAG	23700
CGCGCGTGAC	ACACGCAGGG	AAACGTGCAA	GCGCCTTCAC	CAACTCCCAC	TCAGCTTCGT	23760
GCGTGAGCAA	TGCAGGGTCA	CACCGGACTT	CACGAGGTCC	CTTTTGCTCC	ACATCTTCCT	23820
GAACCTTCTT	TAAAAGAGAA	GAGATGCGAG	CACCCATATA	CTGTAAATAG	GGACCAGTGT	23880
TTCCGTAAA	AGACAAAGAC	TCTTCGGGGT	GAAACACCAT	ATCCTTTTGA	GGACTGACTT	23940
GCAATAAAAA	ATAATGAAGC	GCGGCGATGG	CAACATTCTC	TGCAATACAC	TGTGCGTGTT	24000
TCAGTGCAAT	TTCCCGTCCC	TTTTTTGCAA	TTTCCTCTTC	TGCCGCACTG	TGCAGACGAT	24060
CCAAGATATC	GTCTGCATCT	ACTACCGTCC	CCTCTCGACT	CTTCATACGC	CCATGGGGCA	24120
AGTTGACCAT	GCCATAAGAG	ACGTGATGCA	ACTGcTGCGC	CCACGGATAA	CCGAGCAACC	24180
TAAGCACAAA	GAACAATACC	TTAAAGTGGT	AGTTCTGCTC	GTTTCCCACA	ACATACAGCA	24240
ATTGATCAAA	GGGCCAGTCC	TGTGCGCGAA	AAATCGCCGT	GCCAATATCC	TGCGTAATGT	24300

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 CGCACGCACG TGGGATTCTG CACTTTCCCA GCGCTGTAAC AGGTACGCA CATCGTGcTC 24600  
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 GCGATCGGAC TTGATGCCGG TATGCGCAGG TGTTTTTCCA TGGGCGAATT TTTGATACGC 24720  
 GCACATAGAT TTACAGATAT GTACTCCGCG ATCATTGATG ATATTTACCT tGAACACATC 24780  
 CGCACCACAG AACGCAATAA TACGCGAAAG GCTTTCCCCA ATCGCGTTAT TGCGCAGATG 24840  
 ACCTACATGC AACGGCTTGT TAGTATTGGG ACTAGAGAAC TCAACCATGA TACGTTTGCC 24900  
 CTGTAAGTAc TGCGTGTGGC CATAGCGCTC CCCcTGC GCA AAGATAGCAT CAAGCGTATG 24960  
 CGCAGtACAC ACTCCTTATT TAAAAAGACA TTAAGATAGG GTCCTCGCGC CTGCGGGTGc 25020  
 CATACGCACA CATGGACGTG TCTTCTTCAA GCAGTGTGCA CAACTGCTGT GCAAGCTGTG 25080  
 CAGGACTCCT GCGCACACGC TTTGCAAAAA GGAATAGAGG aAAAGCTATG TCCCCATAC 25140  
 CCGGCTCCGG CGGCTCTTCC ATAActAACT GCGCACCTTC GACCGGn 25187

## (2) INFORMATION FOR SEQ ID NO: 36:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21170 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

TGCATGAAAA TACAACCAGC TTGCTGCATT AAGAACGCAT CAGTACCGTA GCGCAGATAC 60  
 GCACATGGCT TACCACGCCG CGTAGACGAA TGGTCCTCAA TATCATCGTG CAAAAGGCTG 120  
 GCTGTGTGAA TGAGCTCTAC TACCGCGCTC AGTGTGTACC ATTGCGGTTT GGAAATTTTC 180  
 TTCCTCTTGT GTCCTTGGAG TTTCCGATGC GTGCACTGCA CACACGCGTG TGCAAGTTCT 240  
 GCAGAAAGTA TCAGTAACAA CGGTCTCCAG CGCTTTCCGC GCGAGCTGAc ACACGCGTTG 300  
 CACACGGTGC GCAGGACGCG CGTATCTTCG GACGcAAGGA CACGGAGCCG CGTTCCCATC 360  
 CACGAGCGCG TAGtTGCGCa GGAAGTGCAT CGGCGAGTGC TCGTTCAATA TTTCTGAGTC 420  
 GTTGAGCAAG TGCaCGTTTC ATAGTACCGT TATACGGCGT GTTTGCCTTT TGTGCGAGCA 480

CGATGTGTGG GAGCTGTCTAG TGTAACACAT AGCATGGGGG GCGTGTAGGA AGGTGTGAAC	540
GTCTATAAAC GTGCTGATTT TTGGGCAAAA AAGGCAGCCG CCgCGGGGTA CCGCGCGCGT	600
TCGGTGTATA AATTAGCGGC GCTTGATAAA AAATACTCCC TCCTGTCGCG CGCCTCGCGG	660
GTGCTCGATT TGGGCGCCGC GCCAGGAAGC TGGACCCAGT ACGTGCTGGG CACCGCTGCT	720
GCGTGACCCG CCGTGTGTGC GGTGGATGTG CAGCCGATTG CGTCGGACAT TCAGGACGCG	780
CGTTTGCAAC GAGTGCAGGG GGATTTGTGC GCAGCAGATA cACGTGCGCG TGTGCGTGC	840
AACGCTCCTT TCGATCTTAT TCTTTCTGAT GCCGCACCTC GTACGACCGG AAACCGCACA	900
GTAGATACGA GCGCTTCTGC GTGTCTTGCA GCAGGGGTGT GTGCGTACGT CAACTTCTTG	960
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CCGTCACTCT GCTGATACGG GTGCCACGTG TGGGGTACAC GTAAAGATTG ATACCGGAAT	1560
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TGAGTCTGTG CATCTGCTG TCGCAGTGT GTTCCTTCCC GTCATGGAGC TTGTTACCCA	1920
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ACGGGTGTAC ATCCGGTGAA TATGTTTTTG CAACGTTTAT AAAAAGAGAC AAAGGGAGGA	2340
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TAAAAGATGG CACGCACGTG TGCAGCAATG TTGTGGcTAC GCAAATTCCT TTTCATGCGC	2460
CGTATCGTGG CATTGTCCCA GAACTTGCAA GTCGCAAGCA CATTGAGTGG ATTTTGCCAA	2520
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CAGTTCCGTG CTTACTCTTC CCAAAGCGGT TTTGTGCTTC GAGAGGTAAC TGCACACGAG 6120  
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GAGCATTTCT CAACTCGTGT CCATCGTAAAG AGTCGATATG CATGTTAGCA AGCGCCTTGA 21120  
ACTGGTCAAA GAACACGTAG AAATCATCCA CCCGCTCTGA TGGGCTAGTA 21170

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11516 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

ACGATGATAA TCCTCCTCCC TTCAATTCTG ACTTCGGCCT TTnCCACAAC GCACCCGCGT	60
CATTGACTTG ATCTACTTTC TTCTGAGTAT CCGTTACCGC TCCATCCTTG TCGTACTCCT	120
TCTGCAGGTA ATGCAGATAG ATGGGAAACG CGATATGATC AGAATACTTC TTAATTACCT	180
CTTCAAGACG CCAGCGCGTT GCAAACTCGG AATTTTCCTG GCTCAGGTGC AACACAACGC	240
AGGTACCGGC ACTACCCTCA GCAACCCCTT CAAGTACTGG GAAGGCAGCC GCATCAACCT	300
CATCCAAGGT ATAGGCATTT TGCCCTTCAG ACGTCCACTT CCACACGGTG TTCTCTGCAG	360
CTTTCTTGGT GATTACTTCT ACTTTGGAAG CGACCATGAA GGCAGAGTAA AACCCCTACGC	420
CAAACCTGGCC TATCAGATTG GAATCCTGTT TTTGATCACG CGTCAGCGTA CTGAGAAACG	480
CCTTTGTACC GGATCGCGCA ATGGTACCTA GATTGGCCCT CAGATCTTCT GCGTTCATGC	540
CAATACCCGT ATCACGCACA ACAAGCCGTT GAGCATCTTC TTCAAACGCG ATGTCTATAC	600
GCGcTTGCGA ATGCAACTGC TTGTACGTAC CATCAACAAG TGCCTCATAC TTCAACTTAT	660
CTAACGCATC CGACGCATTA GAGATAAGTT CCCGGAGAAA AATCTCTTTA TGGGAATAGA	720
GAGAATGGAT AATCAACGTT AGCAGCTGAC TCACTTCAGT TTGAAACTCG TACTGAGCCA	780
TGTATCCTCC CAGAGGTTAA AAAAGATTCC ATTACGCCGC GCACAGACCG CGCGCGAAGT	840
GTAGCACAGA CTATGCAGCA CAGTAAACCA ACCGGAACAG GTGGTACACG CTGCCCCGATG	900
AACACCAGAC AAAAGAACCC GTGATTGTAT AGCGCTCACA CCCCATGGTA TGATGGGCAG	960
GTCATGGATT ATCCGAGAAG GACTATAGCT TGTGGCGAGC TGCGCAGGTG CCACGTCGGA	1020
ACGGTAGTTG TGCTCAATGG ATGGGTCCAC CGAAAGCGGT CGCACGGAAC CGTTAGTTTC	1080
TTTAACATGC GCGATAGGTC CGGAATAGTG CAGGTTATAG TGAGCCAGGA GGAAAACGCT	1140
AGCCTGTGGT CCACGGTAAA CCGCATACGG TTGGAATGCT GTCTTGCACT CGAAGGCGTG	1200
GTGCGAGAGC GACCTCCTTC AATGATAAAT CGCGCCCTGC ATACCGGGGA GGTGGAGGTG	1260
CACGCTCGCA CGCTGTACGT TCTCTCGGAG AATGCTGTGC TTCCGTTCGG CGTTGATGAT	1320
GTTGTGCATG CGCACGAAGA TATACGCTTA AAATATCGCT ACCTCGACCT GCGCTCTCAG	1380
CGCATGCAGG AGCGCATTGC ACTGCGCTCA CGCGTTGCCC TGGCCATACG GCAGTTTTTA	1440
AGTATGAAAG GTTTCATCGA GATCGAAACT CCCACCTTCA TCTGCTCTAC CCCCAGGGG	1500
GcACGTGACT TTGTTGTCCC TTCCGAGTG TGCCCCGGGC GTTCTATGC CCTGCCACAG	1560

TCCCCCAGC	TGTACAAGCA	GCTTCTGATG	GTGGCAGGGT	TTGACCGCTA	TTTCCAACCT	1620
GCCCGTTGCT	ACCAGAGACGA	GGATGCACGA	GGCGATCGTC	AGCCAGAATT	TACCCAGATA	1680
GACCTTGAGA	TGAGCTTCGT	TTCTCGAGAC	GATGTTATGC	GGGTGAACGA	GGATATGCTT	1740
CGGTACGTGT	TTAGAACCAG	CATCGGTGTC	GAAGTGCCTA	CCTTTTTTCC	TCGGCTTACC	1800
TACGCGCAGG	CGCTAGACCA	ATATGGAACA	GATAAGCCAG	ACATGCGCTT	CAAACCGGTC	1860
CTGCAGAATG	CAGACTTTAT	GGGAATGCTT	GGCACGTTCA	CCCCGTTTGA	AGAAGTCGTC	1920
GCACAGGGTG	GCAGCATCAG	AGCACTCGTT	CTTCCGGGCA	AGGCACGTTG	CTACAGCCGT	1980
AGnAAAtCGA	AGCGTTGGAG	TCTATCGCTC	GAGCACATGA	GGCGCACCAC	CTTTTTTGGC	2040
TTAAGGCAAC	CGGTGGAGGC	CTCGAGGGGG	GTATCGCAAG	GTTTTTTGCa	GGGGTAGAGT	2100
CCGAAGTACG	CCGGCGACTT	TCTGCTCAGG	ATGAAGACTT	GTTGCTCTTT	GTCGCCGATT	2160
GCCGGCACCG	CGTGTGCTGC	GTCGCACTCG	GCGCAGTGCG	CAGCGCTCTT	ATCAGGGACG	2220
AGTCGTTCCC	AGAGAAGGAG	TTGTTTTCTT	TCGTGTGGAT	CGTTGATTTT	CCCCTCTTTG	2280
AATGGAACCC	AGCGGAAAAC	AAGTGGGACC	CTGCTCATCA	CATGTTCTCT	GCTCCTCAGG	2340
AACAGTATCT	TGAGACGCTC	GAGCAAGATC	CCGGTTCCGT	AAAAGGTGAC	CTCTATGATT	2400
TGGTGCTCAA	CGGGTATGAG	CTGGCTTCAG	GCTCAATTCG	TATCCACGAC	ACACAGCTGC	2460
AAAAACGCAT	CTTTAAGATA	GTGGGATTAG	ATCCTGAAGA	AGCGGGGGAA	AAGTTCGGGT	2520
TTCTCACAGA	AGCGTTTAAA	TACGGCGCGC	CgcGCACGGc	GGCATcGCAC	ACGGGTTGGA	2580
CCGCCTCGTG	ATGCTCATGA	CAGGAAGCGA	GTCAATTAGA	GACGTCATTG	CTTTTCCTAA	2640
AAATACACTC	GCCGCCAGCC	CCCTGGACAA	TTGTCCTAGC	GTGCTCGATA	AGCGTCAGCT	2700
TGaCGAGTTA	CACCTCACTG	TACACGTCTA	GGGGCATCGC	TACTCGCTCG	TCGGCGTAAA	2760
ATACCTACCA	GGGGGGGGAG	GGGTACATGG	CTTTTACTGA	GAAGCAAAAG	GGTACTTTGT	2820
GCCTAATGTG	CTCGAGTTTT	TGCTTTAGCG	TGATGAGCGT	CTTTGTGCGT	CTTGCAGGGG	2880
ATCTCCCCTC	TATTCAGAAG	GCATTTACGC	GTAACCTGGT	CTCAACGCTC	ATCTCGGGAT	2940
CTATGCTCTT	TCGTGCGCGT	ACCCGCGTCC	ACGTGCAGGA	TCTCCCCATG	CTCTCCTTGC	3000
GTACCGTGTG	CGGGACGCTA	GCAATCGTCG	CAAACCTCTA	CGCAGTAGAA	CGCTTAACAT	3060
TGGCAGACGC	GTCGTTGCTT	TCGAAGCTCT	CTCCGTTCTT	TACCATACTG	TTTTCTTGCC	3120
TTTTCTTGGG	AGAACGCATT	GCGCCGTATC	AAGTCGTGCG	CCTCTGTGGT	GCCTTTGCTG	3180
CAGGCACGCT	CGTGGTCAAG	CCGAGTCACA	CCCTTTCTCA	CCGTGTATTT	CCCGCGTGTA	3240
TTGGCGCAGT	AGGAGGCATG	ATGACGGGAG	CTGCGCACAC	GTGCGTACGC	TACCTCTCCA	3300



CCCGTGGCGT AGAGAAGTTC TTGGTTATCT TTTTCTTTTC tTCGGATCGC TGCTATTGCT 3360  
GCTCCCTGCA TTTATATGGC AGTACCAACC GATGAGCTCA CCGCAAGTgc TTACGCTGTG 3420  
GGCCGCAGgA GTGGCAGTAG CAGGTGCACA GTTTTTTTCTC ACTGTTGCGT ATCGATACGC 3480  
GCCAAAAAAG TCGATTCCAA TTGACTATAC CCACATCTTA TTTTCGACGG GCATCGGTTT 3540  
CTTGTACTTT AAAGAGGTGC CCGACCACTG GACCGTAGCG GGCATCGGTA TCATTCTCGC 3600  
CATTGCCCTG TACGTGTTTG CGCGCGAGcg TGaACGGAAA GAACCCACCG TGCCGTCGCA 3660  
CACACGCTAG AGCCGATGGC ACGCACGTAC GCGAAgCACA TGGTCTACCC CATGCTTAGA 3720  
TTTTTCTCGG TAAAAGAATG AGGCAGGTGC GCGTGACGTG CACAGGAACT TCCACCGCGT 3780  
ATTTGCCGTC GTGCGGCGCG TCACGTACAG CGACAACGTG GAGAAAATCC TTTCTCGCAA 3840  
GCAGCCgCCC TGAGGGGCGC TGGTACTGAG TAAATCGTA GCTCACACCT ATAACACGAC 3900  
GACCACCAAG CGGTACCGTA ATGCGTCCGT TAATGTCGGT AcGGTAcGTT TCATGCTCTG 3960  
CATGCTCGAA ATGGACAGTG CAAGGCAGCG CTTCGTACGA GATGTGGAac ATATCCGCCA 4020  
CGAAGATATG CACGAAATGG GTATCTGCGC GCGGCGgGGT TTTACATGCA GCGACACACA 4080  
CCCCCACCGT AAGCGCCACA GCCAGAAAAA ATGCTGCACG CGCGCTGTAC CCACACAAGG 4140  
TAACGGAGAT TGCCGCACGC GAGGTTCCTC TCGTATACTC ACCCCTCGTA TGAGTACTTG 4200  
GACACACATC TGGTCTACTG CGTTTACCTT GCTGTTTATT ATCGATCCGA TTGGGAACAT 4260  
ACCGGTGGTA CTGTCytGCT GCGCACCGTG CCAGCTGAGC GTCATACCCG GATCATTTT 4320  
AGAGAACTGC TTCTAGGACT GGTGCTCATG CTCTCCTTCC TTTTTTGGCG AAAAGTTTTC 4380  
CTATCTTTGT TCCAGCTAGA AACGGGAGTA ATGAAAATGG CCGGAAGCGT CATTCTCTTT 4440  
CTCGTTGGCA TCAAGATGGT ATTTCTTGAT CAACACGCGC TCCCCTCCAC CACAGAAGAG 4500  
GAACCGTTTA TTGTTCCCAT CGCCACTCCC ATGATCGCAG GTCCTTCGGC GTTCACCACG 4560  
CTGGTAATTA TGGGAGAGAC GAAGGGGACA TCCCGTCTCG CCACCTGTGc tGCGCTGCTT 4620  
GTTGCGTGGA CGCTCGCGTG TCTTATTATG ATAAGCGCAC CGTGTCTATA CCGTCTTCTT 4680  
AAAGAAAAGG GAATTACCGC GCTTGAGCGA ATCACAGGTA TCTTGCTGCT CATTCTTTCC 4740  
ATCCAGATGT GTGTTGAGGG AGCCCGGGGc ATTATTGCCA CTTCTTAGCA AGAAGGAAAA 4800  
CTACCCGCTG CGTACGTGCG GGCTTAGGGG ACGACGACAA CGTTCGCGAC TCTGCCATCT 4860  
GCCAGGTATG CGCGGGCGTT GCTCTGGGTG TCAAAGGAAG AAGTGCCATC TTTGACGAAG 4920  
GCATAGAGCC ACCTTCCAGG CGGGAGGGGA AGCTCTAGCT CGTAGTGGCC GGGACGCACC 4980  
TCTTCCAGAG AGTACATGAA TGGATCCCAG TTGTTAAACG TACCTGCAAG gTGGATAGTC 5040

TGTCCCGCTG	CACCCTGGTA	CACAAACCGA	GTGCCC	CGCG	CCGTATGCTG	GGTTTGATAC	5100
GATTTCGTGAG	ACGGCACATC	GAGGTAAGAA	ATGGaCATGC	CATCGCGGTG	ATCGTAGCTT		5160
TCGAAGCTAT	TTTCAGGATC	GGTAGTCCAC	AACCCATCAA	TCACAAGCCG	GTAACCTAAA		5220
CGCGAACACC	cTTCAGGAAT	AGGCGCGATA	TGGAaAGAA	CGGAGCGTTC	AGTGAGATTC		5280
TGGGCGCTCT	CTTGACTGAG	GCGCACGAAC	GAGTATATCG	GGCGGTACn	TTCTGTGCTCA		5340
AACGCGATAC	CCACGTGGCG	CGCTGCCCCCT	GACGCagTAA	ACACGACGCA	GCGCCCCCTGA		5400
ATCCGAGGCG	CTTCCACGCG	GGAAATAGAC	TCGATAAGCG	CGCGGCGcTG	CGTCGGATCA		5460
AGTCCAGCCG	CGCAGAGTCC	GACAGCACCA	GACAAAACGA	GCATGACACC	AAGCGCACAT		5520
CCTCTCATCG	AGTTTCTCGA	TCCTCCCCCG	CAAAGCGCAC	CACCACGAAC	ACACCCCCAT		5580
ACCACCGGTC	CTGGCGAACT	CGCAaAGCG	CGGCACACCC	GAAACCCATA	CCGCGCACAG		5640
CTTCGGGATA	TGCATGCGCA	TGCTAAAGGG	AAACCTGTCC	TCCTGGCAGA	CTTCACTCCT		5700
CCACAAAAAA	AACCGATACG	AGGGCGGGGA	GTATAACGCG	CAATGCCGAG	TGCACAACAC		5760
CTGTCAAGT	TTGCTCGCGA	GCTCAAGACT	CTTGGAATG	AGCCAGACAC	CCTCAAATCT		5820
TGGGGTACTC	TGTACGATGA	CCTACCACCT	CCTGAATCTA	CCCCGACGG	GGCACAGCCT		5880
GCGCCACGCG	CTGAGCGGCA	GTCCGCGCCT	GCATCCGCGT	CagcTTCTGG	CCCTGTGTCC		5940
GCACATGGGC	AGCGCcCCTT	TGAGCCTGAC	ACAGAAGCAT	CGAGCGTTGC	CTCGGGAGAG		6000
GAGGTCGTGC	AGGAAGATGC	GCACGCACCA	CAGACTCGAA	TGCATGACTC	CGCACAGGAG		6060
CCAGCGGCGG	AGATTCTCT	CTTTTCTGAA	GAGCGGACAC	CGGAAACTAT	GCCGACTGCT		6120
GCCTGGAGTG	CACCACCGGA	TCCTCTTTT	GAAACCGAGC	ATGCTGTCCC	CCCCCTACCT		6180
CTTGACCCGG	AAGAAACACC	AGTGCCCGGA	GAAAAAGGTC	TCCAGGAGTC	CGCCGTGCAG		6240
GAGGAAGACG	CCGATTAA	CCAGATGCCT	GCGACAGGAG	GGCAAACCAG	CGAGAATCAA		6300
CAACACTTTG	ACGCATTGCT	CGCCTCTCTT	GATCTTGATT	CGGCAATGG	CGAACGCGTG		6360
GTCCCCGAGA	ATGCAGATGA	GTTGCGCGCT	CAGGTACCTG	AATCCCTTCT	AGAAGGGTTG		6420
CATCCAGAAG	ACCAAGAGAC	GAAACGCTCG	CAAGAGGAAC	CTGTATCCTA	TGACTTCCCT		6480
GCGTTTGATC	TGACCAGGT	AGCGCCTCCT	ACACCAGACG	CCCCTGATTC	TTCTAACTCT		6540
GCTCTCACTG	AGATTGAAAT	CACCCAGCG	CTCTCTGAGC	ACCCACGCA	GACGCAGGAA		6600
ACGGGTACCA	CCTCGCCACA	ATCGCAGACT	GTGCACGCTG	ATGCGTCTGC	CCTAGGGCCT		6660
AGTGCCTCTG	ATCCTAATTT	TTCCCCGCGG	TCTGCGGATA	ACTTGGTCGC	CCAATTCCCC		6720
ATTGAAGAAA	GCGTGCAGAT	ACCTCCTTTC	CCCCTGATG	GCTTTGAACT	TCCCGGTAAA		6780

TTCCAAGAAT	TTGCGAGAGA	ATCTGAGAGC	CCCTATTTCA	GTCcTGATAC	AACCGCCGAC	6840
GCAGACCAAG	CACAGACCAT	AAGCGAAACG	GAATATCAAC	GCTTTCTCCA	GCGGCTCGAC	6900
GCCCTCCCC	TTCTGTACG	TATTGCGGTT	CAAGAATACC	TGTCCTCAGA	GGAGACCTCG	6960
GACAAAGAGG	GTTATGCGCT	CATTAGCAGC	ATTGCAAACA	ACGCCTCGCC	AAAAGCGGTT	7020
GCTACTCAAC	TCGAGCACAT	TCTAAAAAAG	CCGCTGCATA	TTCCCAGAAA	GTTTGAACGC	7080
AAGTCAGCTG	CCGCACACGA	ACGCGAGAAG	TCTTCCCTTC	CCTACATCGC	GAAACACACG	7140
GTGCTTCCCC	TGACGGCCAG	CTCAGCGGCC	ATACTCATTT	TCATCCTTTC	GCTTGCACTC	7200
CTCTCCTGGC	ACTTTCTGTA	CAAACCCCTT	CATGCGCACC	TGAGCTACCG	CGCAGGGTAC	7260
CATGCATTAG	AACTGGACCG	CTACGAAGAT	GCACACACTA	ACTTTGAACA	CGCCAAACAG	7320
TACTGGAAGA	TAAAAACTG	GTACTTTCGT	TATGCGCGTG	CCTTACGTGA	CAAAAAACAA	7380
TATACACGTG	CTGAACAAAT	TTACACCGAG	TTACTCTTTG	ATTTCCGGCA	TCCCAAACAG	7440
GGGAGCATTG	AATATGCGCA	CATGCTCTGC	AATGAGcTGC	GCAAATACGA	ACAGGCAGAA	7500
ACGACAtGCG	TCGGCAGGGA	CTCGACCATC	ATCCAAATGA	TCCTGATATC	CTCAGCGCAC	7560
TCGGAGACGT	ATATCTAGAG	TGGGCAGAAG	AGGACCCTGC	TCAATACGAG	CAGGCTCGAA	7620
AAACATACCA	ATCACTCATC	GCTTCCCACG	GCACGCGCGA	TGCGTATCTT	GCACGCATGA	7680
TGCGCTATTT	TATCAGAACA	GATCAGCTCG	CGCAGGTACT	TCCTCTTAAG	GCACACTTTA	7740
CCAATACGCG	CGCTAGGATC	GCTCCTGAAG	ATTTGACAGA	ACTCAGTGGA	TACCTTTTAG	7800
AGAAACGCTA	TGAATCTCAA	CCCAGTGAAT	CCCTTACATT	GCAGTCAAAG	ATTGAGGATC	7860
TGCGCGCATT	ACTTGAGCGG	GCCTTTAAGG	CGGATCCTAT	GTCTGCGGAT	GCGGCTTATT	7920
ACCTTGGAAG	ATTCTTTGTC	TACAATCACC	GCAAGGACAG	CGCGCGGGAA	CTCCTTCAGC	7980
AAGCTGTCAA	CCGTTACCCG	CACATGCCAC	ATTCCACAGT	CAGGCGTACa	CTGCGTGAAA	8040
TTGACGCGAT	GCGCCTGCTC	GGTACGTTAC	TCCTGGAGGA	AAAGGGACAC	GCTGCTGCCC	8100
GCGAAATATT	CACCCAGGCA	CTTACGCGcT	ATCGCAGCTA	TATCGTAATG	cGTGaCCTAC	8160
CGCCGcATCG	GaCTATTGGA	AAACTGTACC	GTGaCTATGC	AGATATGGAC	TACTTTATCT	8220
ACAAAACTA	TGACTCTGCG	TTGGAGCACT	ACCAGCATGC	GCGGGCGCAG	TTACTTGATA	8280
CTCCTGAGGT	TCAATACAAA	ATAGGGTATA	TTCAGCACAA	AAAAAACAAC	TACCCCGAAG	8340
CGATTCGGGC	AATGAATGCA	GCGTACGAGC	ACAATCCTCA	GGATAAGCAC	CTTTTATATG	8400
GATTCGGCAC	CCTGTTGTGT	AAACGTGGTG	ACTACTTTGC	TTCCCAGGGG	TACTACGAGC	8460
AGTTACTTGA	ACTGTTAGAT	GCGCAGcGTA	CAAGACGCGG	TGTCATGCTC	CCCCACATAG	8520

AAAAGGCGGA	CGCCGCGTTT	GTTGATTTGT	ACATGCGCAC	GTGTAATAAC	CTGGGCGTAG	8580
TATTGCACCG	TTTGGCAACG	ACTCATGGAG	ATTGCGGAA	AAATGCACGG	GCGTTAACTC	8640
TGTTTGAGCA	ATCCTCTCGT	GCATGGGACG	CACTCACCCG	TCACCCTGAA	ACCAGGGTGC	8700
GCTCACAAGC	TACCGGTCTT	TCATACCTAA	ACGTCCATCA	CATGACACGC	CCCTACACAG	8760
AGTTTCAGCC	AGAACTGTAC	GACGACATTC	CTCTCCTACT	TGAGCACGAA	GAACCGCCCA	8820
TCCAAAAGGA	ACAAGAGAAC	TAGCCaACGG	TGCCCCGCTTG	CCTGCATGAC	CGAAACAGGG	8880
TAGTCTCCCC	TGAGAGGAGG	CGACTGATGG	GAACGTACAT	GTGTGATTTG	TGTGGCTGGG	8940
GATACAATCC	AGAGGTAGGG	GATGCAGACG	GGGGCATTCC	CGCGGGTatG	CGTTTGAGAA	9000
CCTACCGGAC	CACTGGGArT	gTCCACTCTG	TGGGGTGGAC	AAGACAAGTT	TTGTGAAAGT	9060
GTAGCTCTTC	TGCCTAGAGG	AAAGGGGAAC	GATCCAGTGA	AAAAAAGGA	CGCTTTCGTC	9120
GGTACGATCG	GCTACGACGG	TCAACGGGCA	GTAGTGGACA	GGGCCCCGCT	GCTGAAGCAC	9180
AGCAGGAGTT	CCCTGCAGGA	ACTTCTCAGT	GCGGGGGCCT	TcCGAaGAAG	gCGGCTGCCT	9240
GmGCCGTTTG	GGAACGCTCG	AmArAAGCAC	TGGAGGCCGT	CGCCTCCGCC	TACAACGCCC	9300
GCTCAGGGAG	CAGGTACAGC	GCGCAGGACA	TCGCAAAAGT	TTTCGGCATT	GCCTCCGAAC	9360
CAGGGGAAAA	GGCGGTTGTC	CTCTAGCCGC	CTCCTCCTTT	GCTGAAGATC	CTGCACCCCC	9420
TCAGGCTTAG	CCTGAGGGGG	TGCAGGnTTT	CCCACTACCA	ACTTTCCTGG	CGGATAACGT	9480
AATCGTGAAA	CCTTCCCCTT	TTCAGCGCGT	GCTTTACCCCT	CTCTAGGnTC	CGCGGGGCGT	9540
ATCCCCGGcA	GCACCACGCG	CACCGcGTgC	gTCTGTTCGC	TCATATGAAG	GATCAAAGCC	9600
CGCCTCGCGC	ACTTTAACTA	CCAAGCGGAC	ChATTCTCCT	CACGAACAAA	GGCTCCCAAC	9660
TGTATACGCC	AAAGCACCCC	CCGCGTTTCC	CCCGAATGGG	TTGGCGTATA	CACCGACTTC	9720
ATCCCTGACA	CCTTCCC GCC	ACCAGCTGCG	TAGGGAAGAG	GCGCagCAGC	CGCATAGGAA	9780
GAAGACGAAG	GAACAGGCTG	CGCGTGCGAG	TTAGGTGCAG	CGGAGCCAGG	CACGGCCGTC	9840
CCATAGGGAA	CCCGACTGGG	AGTCGAACCC	GGTGCTGCGT	ACGCGACAGG	CGGCGCACCA	9900
TACTCCGAAG	CGGGGACATC	CGTTGTATTTC	GCCACTCCCC	GCACACCCGG	AGTTCCAGCC	9960
CTCCTTCCGA	CAGGAGCTGG	CGGTGGATTA	TGAGGATCCG	CATACATGAC	AGGCGCACTG	10020
GACGTGGGAG	CAGTAGGCGG	AACACCAAAG	GAATCTTGAG	GTAAGACACC	AGGAGAAGTC	10080
TGCCATATCGT	TGCGTTGCTG	TGAAGCGTGC	GCATTCGGAT	CTGCCTTGTC	TATGGAGACG	10140
CGCGCCACCC	CCGCGTTCAG	CATGTCTAAC	GCAACAGCTG	CAGCCTTTGA	CACGTCAATC	10200
TCTCTATTTG	CAGCGTAAGG	TCCCCGATCA	TTGATGCGCA	CGATTACCTT	TTTGCCGTTG	10260

TCCAAGTTTCG TCAACTCCAC AACCGTACCA AAGGGAAGCG TGCGGTGCGC GGCAGTATAC 10320  
GCGTTCATGT CAAAAATCTC CCCACTTGCG GTAGGTCTTC CGTTAAAAGA CTCCGCATAG 10380  
TAGGAAGCAT ACCCTTCCGG AACGATTACC TCGCCGGCTG CAAAAAGCAT CTGCACGTTC 10440  
CACAATACTG CAGCCACTGC AACGACACGC TTGTCCATCA TTCAACACTC CTTCCAAAGG 10500  
CTTCACCCGA GCAAAACGAT GCTTCACAAG ACACCCCGA CGCTTATCGG AATATGGACA 10560  
AAAAGGTTGA AATCTTTTAA GGTAGGGGCG CAGTGGGTTG CTGGAGACGA GACTTGAAC 10620  
CGTACGACCG CTGCCGGTCA AGGGATTTTA AGTCCCTGAT GTCTACCAAT TCCATCACTC 10680  
CAGCGTTGTG CGGCCGTGCT GCCACTGTAG CGGGTAAGTA GCCGGGAGGT CAACATATAC 10740  
AGTGATTTCG ACTGCCACCT TGCCTGCTT GTAAAGCAA GTGAGGATCC TCAATCCCTC 10800  
TTCAGACAGC TGGACCTTGC ACGCTTCCCG TTTCTCATGG AGGTCGGTAC GCGCGCAGGG 10860  
GATTATCAGG AAAGAAAGGC TCTGCTCCTG CAGGCCTGCG CGGGGCGCTC GCTTCCTTCT 10920  
TGTCTGCACT TCTCTGTAGG GGTCCGGCCT GCGCCGAGC CCATTGCGCA TCCTGAGACA 10980  
GCCCTTTCAC TGCTTCGGTC AGACGTGCGT GCCCTGTGCG CAGAACAGGC GCCCTACCGA 11040  
GCCTTGGGTG AATGCGGTCT TGACCGACAC TGGAATGGCC CTCAGGTAGC GTGCAAAGCA 11100  
cGGAAAGGAT CTGGTGTGCG CGGTACACCA GATCTTGATG CAGAGGAGTA TCTTTTAAAG 11160  
GCACAGCTCT CTATAGCGAA AGcTcAGAAC CTGCCGTCA TCATTTCATTC ACGGGACGCT 11220  
TTTGAACCGA CACTCCGTG CCTGGACTCA GTGGGTGGA GAAAGGGTGT GATGCATTGT 11280  
TTCTCGTACG GATCGTTGAG GCACAGCTT TTTTAGAACG TGGTTGTAC ATCTCTTGTG 11340  
CAGGCACACT TACGTACGCA AAGACGACAT CCGAACTTCT CGCGCGCGAT GCGCTTTATT 11400  
CGGAGTATCC CTCTGGATCG TCTATTGTTA GAAACGGACA CTCCCTACCT CGCTCCAGTA 11460  
CCGCATCGAG GAACACACAA CAGACCCGAG TATGTCCGAC ATACCTACGC GTTGGT 11516

## (2) INFORMATION FOR SEQ ID NO: 38:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2450 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

CACGCATGGG CGCAGACATt GGgTtCATTG GAYtTGCTGT CATGGgAGAG AATCTGgTTC 60  
TCAACATgAG CGCAACGkTT TTTCCkTCGC AGTTTTCAAT CGCACCAcCA mGGTGGTCGA 120

CCGATTTCTT GCAGGGCGCG CTCATGGCAA GCGAATCACC GGCGCCCaCT CCATTGCAGA	180
ACTTGTTTCA CTTTGGCAC GTCCACGCAA AATCATGCTC ATGGTCAAAG CAGGCAGCGC	240
AGTCGATGCG GTCATTGACC AGATACTGCC CCTTCTAGAA AAGGGGGACC TCGTTATCGA	300
CGGTGGCAAC TCTCATTACC AGGATACCAT CCGGCGCATG CATGCGCTAG AGGCCGCAGg	360
TATTCATTTT ATTGGCACAG GAGTTTCGGG GGGAGAAGAG GGGGCCCTCC GTGGACCGTC	420
CCTCATGCCT GGAGGCTCTG CTCAGGCTTG GCCGTGGTT TCTCCCATT TCTGTGCCAT	480
TGCCGCCAAA GCCGACGATG GCACCCCGTG CTGCGACTGG GTCGGCAGTG ATGGCGCCGG	540
GCTACGTGAA AATGATTAC AACGGCATTG AGTACGGCGA CATGCAGATA ATCGCCGAGG	600
GCTACTGGTT TATGAAGCAT GCGCTGGGCA TGAGCTATGA GCACATGCAC CATACTTTA	660
CCCGCTGGAA CACGGGCCcG CTTACACTCG TACCTGATTG AGATTACCGC GGCTATTCTG	720
GCACATCAGG ACACAGACGG CACACCACTT TTAGAGAAAA TTCTAGATGC CGCTGGACAG	780
AAGGGGACGG GCAGGTGGAC GTGTGTTGCA GCGCTCGAAG AAGGCAGCCC GCTTACACTG	840
ATCACAGAGT CAGTGATGGC GCGTAGTCTT TCTGCGCAA AGCAAGCGCG CTGCAAGGCA	900
CATCGCGTTT TTGGTTCTCC CGTGAAAGTC TCCAAAGCAG AAACGCTAAG TGCACAGCAG	960
CGCGAAGAAC TGGTGTCTGC ACTGGAAGAC GCGCTGTATT GCGCGAAAAT AGTCTCGTAT	1020
GCGCAGGGTT TTGAGCTGTT ATCGCATACG GCAAAGCGCC GAGGATGGAC ACTGGaTTTT	1080
TCCCGGaTTG CATCGCTGTG GCGTGGCGGG TGTATTATTC GTTCAGGATT CCTGTCCAAG	1140
ATCAGTGCGG CGTTTGCTCA GCAGCACGAT CTAGAGAATT TGGTACTTGC TCCCTTTTTT	1200
GCAGAGGrAT TAAAGCGTGC GTGTCCAGGC TGGCGCACCA TAGTGGCAGA ATCGGTACGG	1260
CAGGCGTTGC CAGTTCCGGC CCTCTCTGCT GCGTTACCTG GTTTGATGGG TTCACCGGTG	1320
CTGCTTTGCC GGCCAACCTC CTTCAGGCAC AGCGAGATTA TTTTGGTGCG CACACCTACG	1380
AGCGCACAGA TGCGCCGAGA GGAGAGTTTT TTCACACAAA CTGGACAGGC ACCGGCGGTG	1440
ATACCATTGC AGGAACCTAC TCAATATAGG GGATCCTCCC GTCGCTTGCC TTTCGTTCTA	1500
TATTTATATT CCCAGGTGAT CTTGACACCA CCTCGGGTGC TGCCTAGca TGCGCCCGTC	1560
CGGCGGATGT TGTATAACGG CTATTACCCC AGCCTTCCAA GCTGGAGACG TGGGTTTCGAC	1620
TCCCATCATC CGCTTTCCTC CCTACCTCGT TGATTTTTCT GTTCTATACG CGCTACACTC	1680
GCCCCTCGGA GGGGTAGGGT GCATTGCGGG CAGCAATTaC TtGAAAAGAA CAGTATTATT	1740
ATCAGCGGTC TTCCCCCTG GCGCAGGAG TTGTCCAAGA AGTATTGCTC TAAAACGGTC	1800
AATcTGATtT CGTACATGGC AATATCCGTG ACTTCCTCCC CCATCGCGAT ATTCAGGGCA	1860

GCTTCTCCTT CGTTCGCATT AATGACTACA TATCTGAGGT TATCTTCGGT AACCGGGrTA 1920  
 TCATCGTCTT CTATGACAAA TCTGCAGGGC TCACATTTTG TCTACAAGAA ATGCTGAGCG 1980  
 CTTACTTAGA GCGTATGcAT GCCCAGTATC CTA CTGAGGC ACTTGCTGAC TTTCTTTTCGC 2040  
 GTGATCCGGT GAAAGCTTTT GCGTACCTTG AGCGCTACTT TATTATGAAC ATGAAACAGA 2100  
 ATAAGCGTAT GGTCCCTCATC ATCGACTATT CTGAATCTCT CGTTCCTCA GAAGATATTG 2160  
 CAAACTTAAG CGAAACAGAT CGCTATTGCT TCGTCACCCT CAATCGCTGG GCAAATGATC 2220  
 CGGTGTTTAC AAACGAAGAC ATATCCGTTG TGATGCTCAC GGAGAATATC ACTGACATCA 2280  
 ACAGTCGGTT CACCGCTTCT CTTCCACCG TTAAGATTCA CATACCCCTG CCAAATGAAG 2340  
 AAACACGGAT ACGCTTTCTT GAATATCTCA AAACCCAGGA GGAGATTTTA GTACTTGAAC 2400  
 GTGGGTTGAA TACGGAGAAA ATTGGCAAAC TCACTTCCgG TTTGAATTTA 2450

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6426 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

AGCCTTTTGC TGCCGTCAGA GGACGTGCGA ACTTCATAGG TGCCCGTTTG GAAATTACGT 60  
 ACCACACGTG AACGACCGGT GGTGCAGCTG TAAACTGCAG CACCACGCTG TACGTACTGA 120  
 GGGATTTTCGT ACGTCACACC GTCATCAGCG GTAAATACG CnCGTGCGCT GCAAATGCCA 180  
 GCGCGTCATC ACGCCAGTAC CGAAAGCGGT AAAAATTCGC CTCGGTGAAG AAAAAGGCAT 240  
 TCAGTTCTCC AGGCGCCTGG CTAGAATACG CACGCAACGC CTCAGCAGAC CCTTCCTCAA 300  
 TCCAAAACC AAAAAGAGGA TCGTCTGTTC TCACGGGAAT CTGCTCGGAC GAGACGGACC 360  
 CGGAACGGGT ACCATACGAT ACCCGCTGAA AAAAAGAGCA GAACAGCGCG TCCCCCAGC 420  
 GACACAGAAC GAGCGGyTGC ACACGCACAC GCCCCTCAA CGACAAGACA AGATCCACCC 480  
 GTTCTGCCTT TTGCGCCGCA GGGGGCGGCA GCACATCAGC ACGAGCATCA GACAAAGATG 540  
 AAAGGGAAAA GACAGCCACG CGTTCATACA CGTACGCATA ATACGGCTTG TGCACAAGCA 600  
 TGAGCGAAAA ACGCATCGCA TCAGCAGTAG GAGCGATagC AACGATAcGC GTGGCGTTCT 660  
 CCCACACCCC TGCCAAACGC GCCAGAGCAG GCTCAGCTGC CAACCCACC TGAGTACTGA 720  
 GCACGCACAG ACGCACCCAC GCGCTCCACC CTTTTCTGT CATACCGCGT AACCGGTCAC 780

TCAAGCGGCG	CAAAATACCC	TGTCTCGTCC	CGCCCCGAAC	GGCTCAAGAC	GCGCACTTCT	840
GCCTCCACCG	GCATATATGC	ACGACCAAAA	TCCGTCGGCA	ACCGCGATCG	ATACGACAAT	900
GCATAGGTGc	CCCGctGCGC	CTGAGCGCAC	GTGCGCCACA	AGAGCCCCTA	ACCCTTCTTG	960
CGCATACACT	GAATACACCG	CACCCCTTGT	CTTTTGAACC	AGATATCCAA	GCTCCACGGG	1020
CAATACCGTA	CGCTGAAGCT	GTATTACGTA	AAAGCTCGTT	TCATTATTCG	TCAAATATGC	1080
AGCCAAGTCC	GTCACCCCAT	ATTGTGCAAA	ATCCTGTGTC	TGCAATTAC	CAAGAGACAA	1140
GAATACCACT	GCGCGCTTGT	AATCTGCGTT	CACCAGCGTG	CCTGCCGCAA	GACGCAGACC	1200
CAGATCAAAA	CGCCACTGCG	AAGAACTCTT	TGCTCTTAGG	CGAAGcGGTT	GCGcCTGCAG	1260
tGCGCCGCAG	TGAAGGTGCC	TTCCAGCACT	GGTGA CTGTG	CCGCAGAAAC	TACCGACAGC	1320
GTCCCTGTGT	CCCCCACC GC	TTGTGCAAGC	TCACCAATCA	CCCGTGTAAC	CAAGCGCATC	1380
TCCTGTCTCG	TCGCAGGAGA	GCGGTCCACC	AGTATACTGA	GCGAACAcGT	ATCGTTCAAA	1440
TACGCTGCCC	CcTGCAGACG	CATCTCACTT	ACCGGCCGGT	GTTCTTCGGT	AAGAAAAAAG	1500
TTGGAAACGT	CCAATCCCAC	TACCGGCGTC	CCCTCACGCG	TGTGTACCGA	CACATTACAA	1560
GTAACGGAGG	GAAACCGGTC	GGCGTGCAAC	CGCTCAAAAT	GCACAAACAG	ACCGCCGGCA	1620
AGCTCAGAGA	TACGCGAAAC	AATCTCAATC	CTTTCGTTT	TATAATCGGC	AAGGAGCACA	1680
TTGCCATTTG	CATCCGGAAC	TGCCGCCGTT	AAGCGAATAG	GCGCATTTC	CAAACGGGCA	1740
ATCGTGTGCA	AGGACGCGAG	TCCTACATCC	ACCACCATGA	CCTCATTTCG	GAGAGACACC	1800
AACAAGCGTC	CATTCCACGC	CCGCACAGAT	TCAACGTGCT	TGAGCGTCCC	TTCCGCAACG	1860
AGGGTACGCA	CATAATTTCC	TGCCGTATCA	AACACGTAAA	TGGCGCCCTT	CAGAGCATCT	1920
GCCACGTACA	CTAGCTCATC	GAGAATGGCA	ATGCCGCCCG	GAGCAGAAAA	CCCAAAGAAG	1980
CGCGCAGACT	TCTGCCCAAA	ATGGAAGAGA	GGAGACCACAT	CAGGTGCAAA	CACCGCCACA	2040
CGCGCATTC	CAAAATCTGT	CACGTAAATG	TTATCGTAGC	GATCAGTGGC	CAAAA ACTGG	2100
GGGCCGATGA	GTTGTCCGAC	GCCTCTCCCC	TTTCCCCCAA	ATGACTTGAG	GAACCTGCCT	2160
TCCTTCGTAA	GACGACAAAT	GCGATCAGAG	GCAAATTCAG	AAACGAGCAG	ATCGCCTGAG	2220
CGCGTCTGAA	TAACATCAAA	AGGACGGTCA	AAACCCTCAA	CGGGCCCACG	CGTACGcgCA	2280
ATAACACGTC	CGTTCACGTC	AAAGCGAagc	AGCTCGTTAG	AACCGTATGC	GCTCATCCAA	2340
AACGTACCGT	cAGcTAACGC	ACACAAAGAT	AGTGGTCTGC	GGAAAAGAAC	CGTTCCCCGG	2400
CGTACAGCAT	GAAACGATTC	ACTTTCGCTA	AAGTGCAGCG	CGTCTGCTGA	ATCAGGCGCA	2460
AAGTCACGCC	GCTGCTGAAC	CACCTCTATC	TTGTTCCGAA	GCAACGCGCC	GCCGTAGCCT	2520



AGATCCCGCG	CCGCGCCCCA	CTGGTGcAGC	GctGCGCCTT	CAATCCCCT	GCGGTAGTAC	2580
GCATTCCCCA	ACCACTCAAG	AATGAGCGGA	TTACGGGGAG	CAGCAGAAAG	CGCACGCTCA	2640
AACAGCTGGA	TAGCATCATT	GAACGCACCC	CGGTAATAGG	CCAAAACCTC	GCGGCGAAAC	2700
TCCCCTGCTG	CAAGTGCTGT	ATCACGCACA	ACCGGTGGCG	CATGCTCCTG	CGCCCCCT	2760
GCAAAAAGCA	ACAGCAGCGC	GCCTGCGCAC	CCCACAGATC	GTCTACTCAA	ACACCAACCC	2820
CCTCTCAGTG	CCTTTCAGCG	CAGTCTCTTC	TTTCTCCAGA	AAGCTCACAA	AAGGTGCACA	2880
AACAAAAAGC	AGAGAGAAAA	AAGGAGCACG	CAGGCCAAGA	CAAAGAGACT	ACCTCGAACA	2940
GACGCACACC	ACGCCCTATC	CTCAGTACGA	GCAACAAGCC	TGGAACGCAA	AATCCGGCAA	3000
CGGCAACACA	GGAGGCATTG	AAACCGGCTG	CGCATACACA	AGCGTAATCG	CAATGTCACC	3060
ACGCATTACA	ACCGCCCAAT	CGCTGTCTTG	CACCGCGCCT	GTATGCGCCG	CTCCACCCTG	3120
GTACTIONAAC	ACGTGAGCAA	GGCCCGCCTG	GCGCACCGCC	CCACGTTCTT	CATATATCCG	3180
ACGcGCAACG	CGCGCTAAC	AGCACGCGCA	TACGCCTGTG	CCGATCGCGC	GTATATGTTC	3240
ACCAACACGT	CCTCGGAGGA	AAGTGCAGCC	AACGCCCGCA	CGTGACGCGC	CACAAAGCGG	3300
GCAAGCGCCT	GGAAACGGCA	GCCTGTTCCA	AAATCAGAAA	CGGGCAACAG	GCTCGCTGCA	3360
ATCCCCGCAA	TCCCATACAT	CACCGCCTGC	CGTGCTGCGG	CAACCGTTCC	CGAGAACACA	3420
ATATCAGTCC	CCAGATTCTC	CCCTTCGTTA	ATTCTTGACA	CCACCACATC	CGGCGGTGTA	3480
CCCACGCACA	CCTGGCGTAA	CGCGCGATTG	ACACAATCCA	CCGGCGTCCC	TGAGCACGAC	3540
CAAATACCTG	GCTCCACTTC	CTTTACGGTC	ACCGGCTCGA	GCGTAGTAAT	CCCATGCGAA	3600
ACTGCAGAAC	GATCTCTGTC	CGGCGCAACT	ACCGTCACCT	CATACCCCTC	AGGCGCTGtT	3660
TCAGCGCCGC	aTGAGCGCG	CGAATGCCTG	CTGCCTGATA	CCCATCATCG	TTTGTCAGTA	3720
GTATCCTCAT	AACACCCGGG	CCCCCTCAGA	GCACTGTACC	TCATACGCCG	CTGCTTTGAA	3780
ACCGAAGATG	CGCTCGTACT	CGTCGAGCCT	TTCTAGGTAC	GGCTCAAAGT	CTTGATCGCG	3840
CAAAATCGCA	TAGGTGCACC	CACCAAAGCC	CCGACCCGTG	AGGCGCGAGC	AGACCACATC	3900
CGGCGCATCA	GGATCTACAA	ACTCAAGCGC	ACGCTTCACC	AACCAATCGA	GTTCTGGACA	3960
AGAAATTTCA	AAGCGGTCCC	GCAGGCGCTc	ATGAGAGCGG	TTCCTACTC	TTGAGAACGC	4020
AGCAAAATCC	CGCTTACGCA	GGGCTTCAAT	CGCCTCATCA	ACGCCAGCG	ACTCGCGCAC	4080
CAAACCTGATC	ACTCGCCTCC	GTATTCCCTC	AGGCACATCT	ATTTCCTCCA	ACGCTGCTGC	4140
CaTGAGCTTA	GACATAGCGC	GAGGCATATC	GGGATTGCGC	TTCACCAATT	CATAAGCATC	4200
CACGCAACGC	TTCAAACGCG	CGGTGAACTC	CTCACGCGCG	ATGAAACGGG	GAACACGCGA	4260

GTCAGTAAGC	ACAATACGCT	TCCCCTCCGA	GGGAAATTGA	CACAGTTCCG	CCTGCTTCTT	4320
GCGGTGATCA	GTGCGCACGC	AGCTACCCTG	CTTTGCAAAC	AACACGCACA	GAATATCCGC	4380
GCGATGTGCG	TGGGTCTTGA	GATAGCGCTC	ATTTGCGTGT	TCCACGATCG	AAACAACACT	4440
TTCTTTTGGC	AGCGTAGcGG	CAAACAACCT	TCCAAGCACA	AGGGCCATGG	CAACCTTCAG	4500
CGCATTGGGA	GTACCCAGCC	CCGCATCAGG	AGGAATCTGA	GAAAGGATAG	TGCAGTTCAA	4560
CCCCGTCAGG	TGATACCCAC	CATCCATGAA	GGAGAGAATG	ACCGCCTTTA	CCGAATTAGC	4620
CCAGCGATCC	TCCTTACGAT	AGCGTAAATT	AGCGGTGGAA	ATCTTCCTCC	GCTCCCCAAG	4680
CGTTAAGGAG	AAAAGGCGAA	AGGTGCTATC	CTTTCGGCGC	GAGACACACA	GCGTAAGGGT	4740
TTGATCGATA	GCCATCGACA	GGGTGTTGCC	CtGAGCAAAC	CACAGATACT	CCCCCAACAG	4800
GTGAAAACGA	CCCGGAACGA	CTGCAATCGC	CTCAGGCTCG	TCGCCGTACT	CCTCTGTGTG	4860
GCAGGACTCT	AyCcCGTGCA	TGCGCAGCAT	CATAGcCAGT	GTATTGAAAT	AATACAACAA	4920
AAATGCTTTT	CTGGCAGGGG	AAAGTTATGC	TTTGCACAGC	GCCTCTTGTT	TCAAGCGCCG	4980
CCTCGGCGGT	GCTCTTGGA	TTTGCATTC	CCAACGAGTT	TTGGCTCGCC	GGTTCCTCCG	5040
TGCTAGGGTT	GGGGGCGCTT	GTTCCCTTGT	ACGTTGGATT	CCTCCTCTCC	CCTGCAAAAA	5100
AACACGTTGC	CTGTTCTTAT	GGGCTGTTTC	TCGCACTCGT	GCACGCGTGT	TCTAGCTTTT	5160
GGCTCAAAAA	CTTTCAGGGC	TTGCGCTCT	TCACCCTCGG	CGCATCAACT	GTCGGTTACT	5220
TCTTCTATGC	GCTTCCTTTC	GGCGTAgcGT	tCGCATGCAT	CCTGCGCAAg	CaGGCgCCCC	5280
CGCGTGCCTG	CGCTTTTGCG	CTCGTGTGGA	CCCTCTGGGA	ATGGGTAAAG	TCAACCGGTA	5340
TACTCGCCTA	CCCGTGCGGT	ACGGTCCCTA	TGACCGCGCA	CAGCCTCTCG	CACCTCATAc	5400
AGATAGCTGA	TATCACCGGC	GTCTGGGGGC	TTTCCTTCCT	CATCCCGCTC	GCAAACGCGT	5460
GCGTTGCAGA	AAGTCTCCAC	TTCTTCATAA	AAAAGAGAGA	CAGCGTCCCT	GTGTTCCGTC	5520
TCTGGCTCCT	CACCGGCTGC	TTGTACTGCC	TGTGCAGTCT	CTACGGTGCC	TACCGCATCG	5580
CCACCCTTGG	GGCTCCACGT	ACCACGCTCG	CGTTGGCAAT	CGTACAGCAA	AATGCAGATC	5640
CGTGGGATAC	AACTTCCTTC	GAAAAAAACC	TCACCACCGC	TATACATCTG	ACTGAGACAG	5700
CCCTTCGTAC	GCAAACAGCT	CCCCCCTGc	CGACTACTCC	CTACAGAAAA	GAAAAAACAC	5760
TCACACACGC	TTCTGCGCgC	GCACCTGTcG	ACATGGTGGT	TTGGAGCGAG	TCTAGTCTGC	5820
GCTATCCGTA	CGAACAGTAC	CGTCACGTGT	ATAACGCATT	GCCAGCGGcA	CGACCTTTCT	5880
CGGCGTTCTT	GCGCAcGCTC	GGCGCGCCCC	TTCTGGTGGG	AACCCCTTG	AGACTGTCTG	5940
GTAActCCAC	TAAAGGTGGA	TACGCCAATG	CAGTGGCCTT	GcTCCGCCCA	GACGGGCACG	6000

TGGCGCAGGT ATATGGCAAA ATGCAGATGG TGCCATTTGC AGAATTCATT CCCTGGGGAC	6060
ACATGACATC TGTACAAAGA CTGGCGCAGA TGCTCGCCGG CTTTTCGAA AGCTGGACGC	6120
CAGGGCCAGG GCCGCGCTTG TTTTCATGTGC CGTGCGCCGC AGAGGCAGCG TCGCTTCGC	6180
AACTCCCATC TGTTACGAAG ATGCCTTTCC TTCCCTCTGC GCCGCTTTGC ACACACAGGG	6240
GAGTGAGCTC CTTATTAATC TTACGAACGA CTCTTGGTCA AAAACTGCCA GCGCAGAGTG	6300
GCAGCACTAT GTTGTCTCTC TTTTTCGGGG CATAGAGCTG CGTACCAACC TCGTGCCTC	6360
TACAAAnTCT GGCTATACCG TCGTCATCGG nCCAGAGGGA AAAAnGCGCG CCGGTTTTCC	6420
GTTGTT	6426

## (2) INFORMATION FOR SEQ ID NO: 40:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 2190 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

TGTGCGCAAC AGACAAACAC GTCCGGCAGG ACGTACTTCC ACAAGnAAGC GTTCCGTCAC	60
GCCACAGGGG TAGGCACCAG GACGCGCCAC GTAGATTGCA CTCACTCCTT GCTTTTCAGA	120
GGAAGGAGGT GATCCTGCAT CCTGTTTCTT TGTCTCACGT GCTGTGTCCG ACGCATGTAT	180
GCAGTGGAAC GAAAACTCAC GTTAAGGGAT TTTGGTCATG AGATTATCAA AAAGGATCTT	240
CACCTAGATC CTTTTAAATT AAAAATGAAG TTTTAAATCA ATCTAAAGtA TrTaTGrGtA	300
AACTTGGTCT GACAGTTACC AATGCTTAAT CAGTGAGGCA CCTATCTCAG CGATCTGTCT	360
ATTTCGTTCA TCCATAGTTG CTGACTCCC CGTCGTGTAG ATAACTACGA TACGGGAGGG	420
CTTACCATCT GGCCCCAGTG CTGCAATGAT ACCGCGAGAC CCACGCTCAC CGGCTCCAGA	480
TTTATCAGCA ATAAACCAGC CAGCCGAAG GcCGAGCGCA GAAGTGGTCC TGCAACTTTA	540
TCCGCCTCCA TCCAGTCTAT TAATTGTTGC CGGGAAGCTA GAGTAAGTAG TTCGCCAGTT	600
AATAGTTTGC GCAACGTTGT TGCCATTGCT ACAGGCATCG TGGTGTACG CTCGTCGTTT	660
GGTATGGCTT CATTCAGCTC CGGTTCCTAA CGATCAAGGC GAGTTACATG ATCCCCCATG	720
TTGTGCAAAA AAGCGGTTAG CTCcTTCGGT CCTCCGATCG TTGTCAGAAG TAAGTTGGCC	780
GCAGTGTTAT CACTCATGGT TATGGCAGCA CTGCATAATT CTCTTACTGT CATGCCATCC	840
GTAAGATTCG CACTTCTAAG GCGTTCAGA CTTCCTTTT CCAAACCTTC TCTCAGGTTG	900

GCCTCAGTGG GCTCCAATCT GGGGCAGAAA AACCAGTACG AATGnATCCG ACACAAACCA 960  
GTCTAACGAG CCGGATGATG CGTCACAAAG GATGGAGCAC AAAAGGGAAA CGTTGGAGTG 1020  
ACAGAACAGC ATGGCAAAAA CGCGCAGGCG TTGGGTCCGA GCCAGAGAAC TCGGTCGCA 1080  
TTAGCnCCTA ATTTTGCAGA ACTCTGTGGC AGCCAGTACG GGAGATAGGA AAGTTGCTCA 1140  
ATTTCGAAAC AGCACTTTTT TCTGACATTC CCAGCCTGTG GCCCATAAAG GGAGGCGTAG 1200  
TCACATTTCC ATGGCATTTC GCAAGAACCG ACATCCATTT ACAGGGCAGT GGTATGTACA 1260  
CAAGGGTATT GATCTATCCA CTCACCGTTC AGGGGATCCT ATCGTTGCCA CTGCAGACGG 1320  
ACATGTGGTG ACGGTAGAAT ACGATTCGGG TTGGGGAAAC TACGTTATTA TCAAGCACAA 1380  
ACATGGGTTT TATACCCgCT ACGCGCACAT GCAATCCTAC ACCGTCACCC GTGGGCAGCA 1440  
CATCCGACAA GGACAAATCA TCGGTTATAT CGGCGCCACG GGTGTAGCGA CTGGTCCACA 1500  
TCTGCACTAT GAAATACATA TCGGCTCTGA CGTTGTTCGAT CCTGGTAAAT ACCTCAACGT 1560  
CAAACTGCA GGGGCAGGAT AGTGTCTCAA CAGGATGGAA TACATGGCAA AGATTGAGCG 1620  
TCGCTCCATG AACACGCTTA TTGGTGCAGG CTCCCGTATC AGCGGGAACG TTGTTGTCCC 1680  
CGGTTCAAGT CGCATTGAAG GGGATGTCGA TGGGGACGTT ATCACTACAG GGCACGTGGT 1740  
AATCGGAAG CGngcGcGTG TCCGCGGCGT CATACGGGTA GGGAGCATCA TCGTAGGAGG 1800  
AATGGTTGAA GGAGATATCG TTGCGTCAGA GCGGTCAG GTGCTCCCTT CTGGAGTTAT 1860  
TCTGGGCGCA TGCTTACCCG AAAAATTGTG GTGGACGAGC AAGCTTTTTT GGATGGTTTT 1920  
TGCTATGCAG TGGCAGATCA AGAGGGATTC AACAAAGTGC TCAAGGCCTA TCTCGGTCGT 1980  
AAAAGTATTC ATACGTCTGC GTTTgGATAC AACAAGTACA GCAAGTCAGG ATAAAGCGGa 2040  
TGGGATATCG CGTAGGAAAT TCTGACTCTA CGTCTTTACT GTCCGCATTC GCTCCTCCTG 2100  
AGAGAGCCAA AAAAAAGTCA AAAGAAAAAC GGCCCTTGCA GGCTGCGCGC TTTCTCTCCC 2160  
TCCTATATCC TAAGACGGAn CCGCACTCTG 2190

## (2) INFORMATION FOR SEQ ID NO: 41:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6570 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

CTCCGTATAG AGGGCCTGAG TATAGGCACG CCCACAGGG ATTGTCAACG TCTTATGCAG 60